



**LEVEL**

DUST/DEBRIS FIELD TEST

ADD-ON

FINAL REPORT

FEBRUARY 1979

U.S. ARMY DUGWAY PROVING GROUND  
Dugway, Utah 84022

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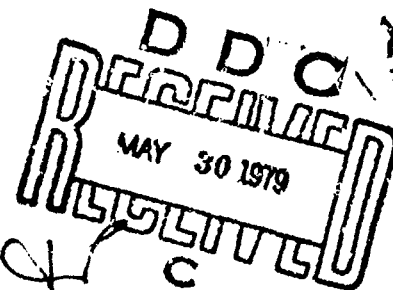
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TRADOC AC No.

7-CO-RD8-DP1-005

DPG-FR-68-313 Add-On

PM Smoke/Obscurants



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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) As a result of heavy rains during a Dust/Debris Test at Ft Sill, Oklahoma, PM Smoke requested Dugway Proving Ground (DPG) characterize additional dust/debris trials at DPG. A total of nine trials were conducted. Dust was characterized for a moving vehicle (M60 tank) and explosions from the submunitions for M483A1, 155mm projectiles. Debris from the muzzle blast of an M60 tank with 105mm HEP was characterized. Dust/debris cloud characterization included visual and infrared (near, mid, and far) transmittances, dosages, particle size distribution, extinction coefficients and cloud luminance.		

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## SUMMARY OF RESULTS

At the request of the Project Manager, Smoke/Obscurants, (PM Smoke), nine trials were conducted at Dugway Proving Ground (DPG) during September 1978, to characterize clouds simulating battlefield dust/debris. Four trials were conducted to characterize dust clouds from vehicular movements; three trials were conducted to characterize dust from M42 submunitions; and two trials were conducted to characterize muzzle blast effects using the M60 tank with 105 mm HEP round. Cloud characteristics determined at the request of PM Smoke included visual transmittance, infrared transmittance (near, mid, far), dust sampler dosages, particle size distributions and extinction coefficients. In addition, data have been provided for cloud luminance ( $1.06 \mu\text{m}$ ). Testing was limited to nine trials because the test instrumentation had to be moved to Eglin AFB in support of Smoke Week II. Consequently, phases A and B (projectile impact), which were scheduled to be conducted on Target X Grid, were cancelled.

### FOREWORD

This test program was requested and supported by the PM Smoke as a supplement to the tests conducted by Dugway Proving Ground at Fort Sill, Oklahoma during May 1978. Tests were conducted during September 1978, at Dugway Proving Ground.

Dugway Proving Ground was responsible for the test planning, test execution, and test reporting.

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## SECTION 1. INTRODUCTION

### 1.1 BACKGROUND

In virtually any battlefield environment, significant amounts of airborne dust/debris will be produced by vehicular motion, exploding artillery projectiles, by burning material and structures and other causes, quite apart from deliberately generated smokes and obscurants. Such airborne materials degrade visual observation, a fact which had been recognized for many years and served as the stimulus for the development of smokeless powders. Smokeless powders provided relief from the obscuring effects of battlefield operations, but that advantage was relatively short-lived. In more recent times, battlefield haze and debris have again assumed major significance because of the massive use of munitions and sophisticated weapons and instruments whose effectiveness may become impaired whenever airborne substances interfere with the propagation of visible and infrared light.

As addressed in References 1 and 2, 20 dust/debris trials and four vehicular movement trials were conducted at Fort Sill, Oklahoma in May 1978, in an attempt to quantify the obscuring effects of dust/debris. Results of those trials were presented by Reference 3 in September 1978. Supplemental testing was conducted at Dugway Proving Ground (DPG) during September 1978 as requested in Reference 4. Results for trials conducted at DPG are presented herein.

### 1.2 DESCRIPTION OF MATERIEL

Dust and dust/debris were generated by vehicular movement, explosive munitions, and muzzle blast. Table 1 indicates the obscurant sources by trial.

### 1.3 TEST OBJECTIVE

The objective of this test was to characterize dust and dust/debris produced from vehicle traversals, exploding munitions and muzzle blasts.

#### 1.4 SCOPE

This test program consisted of nine trials in which obscurants were generated from vehicle transversals (4), exploding munitions (3) and muzzle blasts (2). In an effort to quantify characteristics of the cloud related to obscuring effectiveness, data were collected using transmissometers operating at several wavelengths, dust samplers, and particle size analyzers.

Table I. Summary of Trial Data

TRIAL NUMBER	DATE	DUST/DEBRIS SOURCE	NUMBER OF ITEMS
D1	14 Sept 78	Vehicle Movement	1 M60 Tank
D2	14 Sept 78	Vehicle Movemen	1 M60 Tank
D3	14 Sept 78	Vehicle Movement	1 M60 Tank
D4	14 Sept 78	Vehicle Movement	1 M60 Tank
E1	25 Sept 78	M42 and M46*	88
E2	27 Sept 78	M42 and M46*	44
E3	29 Sept 78	M42 and M46*	88
C1	28 Sept 78	105 mm HEP	1
C2	29 Sept 78	105 mm HEP	1

\*Submunitions from M483A1, 155 mm projectiles

## SECTION 2. DETAILS OF TEST

### 2.1 DATA ACQUISITION PROCEDURES

#### 2.1.1 Meteorological Limitations

- a. There were no meteorological limitations for ambient temperatures, relative humidity or cloud cover.
- b. Precipitation: None.
- c. Wind speed: Sufficient wind speed to move dust cloud through the sampling line. The upper limit that would interfere with test measurements was to be determined by the DPG Test Officer.
- d. Wind direction: Within  $\pm 45$  degrees from the normal to the sampling line.

#### 2.1.2 Grid Configuration

The test grid was configured for one line of sight 1500 meters long (Figure 1).

#### 2.1.3 Sampling

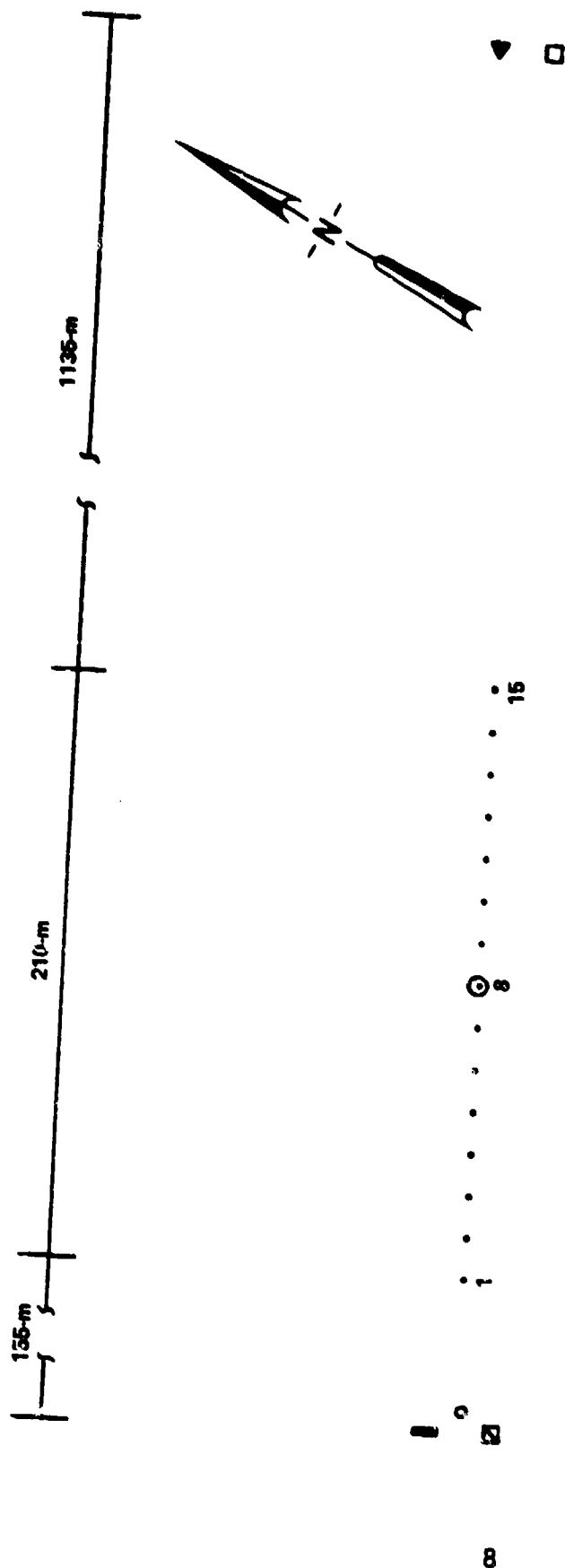
Dust sampling was accomplished using 15 samplers with 102 mm glassfiber pads. These samplers were located along the line of sight approximately 15 meters apart (Figure 1). A particle size analyzer was used to determine the particle size distribution of the dust/debris.

#### 2.1.4 Trial Details

The nine trials conducted were as described in Reference 6. A brief description of each trial follows:

- a. Trial D1: The vehicle traversal was started at 1103 hours on 14 September 1978, and continued for two minutes. The M60 tank was driven in a circle approximately 40 meters in diameter. The dust samplers were activated two minutes prior to start of vehicle traversal and were deactivated one minute after the dust cloud had passed the dust sampler. End of dust occurred at 1105:15 hours and dust samplers were deactivated at 1106:15 hours.

- b. Trial D2: The vehicle traversal was started at 1124 hours on 14 September 1978 and continued for one minute and 40 seconds. The M60 tank was driven in a circle approximately 20 meters in diameter. The dust samplers were not activated



- DUST SAMPLER POSITION
- ◻ AN/GAQ TRANSMITTERS
- ◻ AN/GAQ RECEIVERS
- ⊙ PARTICLE SIZE ANALYZER
- 2-METER MET MAST
- ◀ TELEPHOTOMETER
- BLACK & WHITE TARGET

FIGURE 1. TEST GRID AND SAMPLING LINE.

during this trial in accordance with the operations plan (Reference 6). End of dust occurred at 1126:09 hours.

c. Trial D3: The vehicle traversal was started at 1200 hours on September 1978, and continued for one minute and 40 seconds. The M60 tank was driven in a circle approximately 20 meters in diameter. The dust samplers were activated two minutes prior to start of vehicle traversal and were deactivated one minute after the dust cloud had passed the sampler line. End of dust occurred at 1202:03 hours and the samplers were deactivated at 1203 hours.

d. Trial D4: The vehicle traversal was started at 1221 hours on 14 September 1978, and continued for two minutes. The M60 tank was driven in a circle approximately 20 meters in diameter. The dust samplers were not activated in accordance with the operations plan. End of dust occurred at 1223:30 hours. The wind velocity increased during this trial; gusts to 20 mph were recorded, and light rains started.

e. Trial E1: Eighty-eight M42 and M46 submunitions from M483A1, 155 mm projectiles were positioned on the grid in accordance with a preselected configuration simulating an expected dispersal pattern (See Appendix B. for E1, E2, and E3 trials), and ripple fired over a 2- to 3-second time period. Firing was initiated at 1355:05 hours on 25 September 1978. The end of dust was declared at 1357:20, and dust samplers were deactivated at 1359 hours. Misfires were recorded for 15 of the 88 submunitions. Misfires occurred as a result of damaged wires, primer misfires and the main charge failing to detonate.

f. Trial E2: Forty-four M42 and M46 submunitions were positioned on the grid and ripple fired, over a 2- to 3-second time period. Firing was initiated at 1301:30 hours on 27 September 1978. End of dust cloud was declared at 1302:23 hours, and dust samplers were deactivated at 1302:23 hours. Misfires were recorded for 11 of the 44 submunitions due to severed detonation wires caused by the ripple firing. The dust cloud was not fully contained within the sampling grid.

g. Trial E3: Eighty-eight M42 and M46 submunitions were positioned on the grid and ripple fired over a 2- to 3-second time period. Firing was initiated at 1326 hours on 29 September 1978. End of dust cloud was declared at 1329:37 hours, and dust samplers were deactivated at 1330:37 hours. Misfires were recorded for 9 of the 88 submunitions due to severed wires (eight cases) and failure to function when the primer detonated (one case).



h. Trial C1: The 105 mm HEP round was fired at 1413 hours on 28 September 1978 from an M60 tank for muzzle blast effect. The tank was positioned approximately 60 meters upwind (south) of the grid center and the tube elevated 100 mils. End of the debris cloud was declared at 1414:17 hours, and dust samplers were deactivated at 1414:17 hours.

i. Trial C2: The 105 mm HEP round was fired at 1445:30 hours on 29 September 1978, from an M60 tank for muzzle blast effect. The tank was positioned 25 meters upwind (north) of grid center, and the tube elevated to 100 mils. End of the debris cloud was declared at 1446:30, and samplers were deactivated at 1447:20 hours.

## 2.2 ANALYSIS

### 2.2.1 Dust Sampler Data

Dust particle sampling was used to develop extinction coefficients for airborne material produced by muzzle blasts, exploding munitions and vehicular movement. Dust sampling was accomplished on seven trials, two from muzzle blasts, three from exploding munitions and two from vehicular movement.

The dust sampler data presented in the form of dosages (gram-minutes/cubic meter) are shown in Appendix B, pages B-1-2 and B-2-2 for the muzzle blast; B-3-3, B-4-3 and B-5-2 for the exploding munitions; and B-6-3 and B-8-3 for the vehicular movement.

The dosages for the vehicular movement trials indicate the dust cloud was more effectively contained within the sampling line than during trials involving clouds from muzzle blasts and exploding munitions. The dosages were also larger, with a peak of 0.468 gm-min/m<sup>3</sup>.

The dosages for the muzzle blast trials show the clouds were fairly well contained within the sampling line, but were very light, with a peak of 0.0335 gm-min/m<sup>3</sup>.

The clouds from the exploding munitions were contained within the sampling line to about the same degree as in muzzle blast trials and the dosages were comparable, with a peak of 0.0341 gm-min/m<sup>3</sup>.

To summarize, containment within the sampling line was best during trials with dust clouds from the vehicular movement, and the dosages were approximately an order of magnitude

greater than in trials with clouds generated by muzzle blast and exploding munitions. Clouds from muzzle blasts and exploding munitions were very similar. The dosages were an order of magnitude smaller than the dust clouds produced by exploding munitions at DPG and Fort Sill (Smoke Week 1, Reference 7, and Dust/Debris at Fort Sill, Reference 3).

### 2.2.2 Transmittance Data

Transmittance was measured for the 9.75, 3.4, 1.06 and 0.4-0.7  $\mu\text{m}$  wavelengths and are reported in graphical form in Appendix B. The method of producing dust in the vehicular movement trials is reflected by the cyclic pattern of the transmittance curves. Tabulated data, from which the graphs are made, are reported in Appendix F.

It should be noted that the length of trial E2 was only 36 seconds due to the inadvertent shutoff of the dust sampler switch.

### 2.2.3 Cloud Luminance

Luminance data were obtained for 1.06  $\mu\text{m}$  wavelength in units of microwatts/cm<sup>2</sup> /sr/nm. The luminance for the visual wavelength (0.4-0.7  $\mu\text{m}$ ) was recorded in footlamberts. These data are shown in graphical form in Appendix B and in tabular form in Appendix F.

In the muzzle blast and exploding munition trials, similar luminance curves for both the 1.06  $\mu\text{m}$  and 0.4-0.7  $\mu\text{m}$  wavelengths were obtained, except for trial C1 in which peak luminances of 0.441 microwatts/cm<sup>2</sup> /sr/nm and 365 footlamberts for the 1.06  $\mu\text{m}$  and visual wavelengths, respectively, were recorded. The average peak luminances at 1.06  $\mu\text{m}$  and 0.4-0.7  $\mu\text{m}$  for trials C2, E1, E2 and E3 were 1.50 microwatts/cm<sup>2</sup> /sr/nm and 2274 footlamberts, respectively.

The average peak luminance for the vehicular movement trials at the 1.06  $\mu\text{m}$  wavelength was 0.696 microwatts/cm<sup>2</sup> /sr/nm, and at the 0.4-0.7  $\mu\text{m}$  wavelength, the average peak luminance was 952 footlamberts.

#### 2.2.4 Particle Size Data

In Table II, the number median diameters (NMDs) are listed for the trials involving vehicular movement and explosive munitions. The average NMD is 3.40  $\mu\text{m}$  for the vehicular movement trials, compared to an average of 2.79  $\mu\text{m}$  seen during similar trials of the Dust/Debris Test conducted at Fort Sill, Oklahoma (Reference 3). The average NMD is 1.3  $\mu\text{m}$  for the trials with exploding munitions, compared to 1.2  $\mu\text{m}$  for those at Fort Sill.

The differences in size distributions measured for trials with explosive munitions and vehicular movement may possibly be due to dust being generated from different soil strata. Also, the explosive munitions may have deagglomerated the soil to the extent that the particle size distribution was significantly lowered.

Table II. Number Median Diameter

TRIAL	NMD( $\mu\text{m}$ )	AVERAGE
D1	3.37	3.40
D2	3.28	
D3	3.89	
D4	3.06	
E1	1.4	1.3
E2	1.2	

Particle size data were not obtained for trials C1 and C-2 because of instrument failure.

#### 2.2.5 Calculation of Extinction Coefficients

Extinction coefficients can be calculated from the integral of the negative logarithm of the transmittance divided by the dosage of obscuring material integrated over the distance of the optical path. The time intervals for transmittance and dosage must correspond.

Extinction coefficients by trial and wavelengths are listed in Table III.

Extinction coefficients were determined for seven DPG (Fort Sill Add-on) trials. For trials D2 and D4 the extinction coefficients were calculated using data from trial D3, because, in accordance with the operations plan (Reference 6), dosages were not measured. Tables IV, V and VI summarize extinction coefficients computed using dust data generated by muzzle blast, exploding munitions and vehicular movement, respectively.

Table III. Extinction Coefficients( $m^2/gm$ ) by Trial  
at Various Wavelengths

TRIAL	0.4-0.7 $\mu m$	1.06 $\mu m$	3.443 $\mu m$	9.75 $\mu m$
C1	0.17	0.25	0.29	0.30
C2	0.23	0.30	0.26	0.12
D1*	0.11	0.11	0.10	0.07
D2	0.47	0.47	**	0.29
D3	--	0.47	0.42	0.29
D4	0.44	0.45	**	0.28
E1	0.57	0.58	0.49	0.24
E2*	1.32	1.34	0.97	0.58
E3	0.40	0.56	0.49	0.19

\* These trials were not used in averaging the extinction coefficients in Tables IV, V and VI. For trial C1, the integral of the logarithm of the transmittance was very low. For trial D1 the dosage data are suspect. The dosage data for trial E2 are also suspect due to failure to contain the cloud within the sampling grid.

\*\* Extinction coefficient at 3.4  $\mu m$  from trial D3 was used in determining extinction coefficient for wavelengths 0.4-0.7, 1.06 and 9.75  $\mu m$ .

Table IV. Representative Extinction Coefficients For Muzzle Blast, Trial C2\*\*\*

Wavelength (micrometers)	Extinction Coefficient ( $m^2/gm$ )
0.4-0.7	0.23
1.06	0.30
3.4	0.26
9.75	0.12

\*\*\* The integrals of the logarithms of the transmittances for trial C1, as mentioned above, were very low due to high transmittance values (near 1). The extinction coefficients determined for trial C2 are considered more representative.

Table V. Average Extinction Coefficients For Exploding Munitions, Trials E1 and E3

Wavelength (micrometers)	Extinction Coefficient ( $m^2/gm$ )
0.4-0.7	0.48
1.06	0.57
3.4	0.49
9.75	0.41

Table VI. Extinction Coefficients For Vehicular Movement, Trials D2, D3 and D4

Wavelength (micrometers)	Extinction Coefficient ( $m^2/gm$ )
0.4-0.7	0.47
1.06	0.47
3.4	0.42
9.75	0.29

Sufficient data were produced during trials C2, E1, E3 and D3 to permit calculation of extinction coefficients for the types of obscurants presented in this report. Extinction coefficients for trials D2 and D4 could not be computed from the integral of the negative logarithm of transmittance divided by the dosage because no dosage data were collected for these trials. A value of  $0.42 m^2/gm$  for the extinction coefficient at  $3.443 \mu m$  wavelength was determined for trial D3. This value was used with the ratios of the integral values of the logarithms of transmittance through time to calculate the extinction coefficients for the wavelengths 0.4-0.7, 1.06 and  $9.75 \mu m$  for trials D2 and D4.

#### 2.2.6 Integrated Concentrations

Transmittance at the  $3.4 \mu m$  wavelength together with the extinction coefficient were used to compute the CL values (integrated concentrations along a line of sight) as a function of time. These values are shown graphically and in tabular form in Appendices B and F, respectively. The CL values for trial C1, D1 and E2 should be used with caution because of the uncertainty associated with the calculated extinction coefficients for these trials.

In trials D2 and D4, where dosage values were not available, an extinction coefficient of  $0.42 \text{ m}^2/\text{gm}$  was used to compute integrated concentrations.

Peak CL values varied from  $9 \text{ gm/m}^2$  to  $50 \text{ gm/m}^2$  for the vehicular movement trials. Muzzle blast and exploding munition trials produced peak CL values varying from  $1 \text{ gm/m}^2$  to  $6 \text{ gm/m}^2$ .

#### 2.2.7 Contrast Ratios

Contrast ratios were computed from the transmittance and luminance of the clouds at the  $0.4\text{--}0.7 \text{ }\mu\text{m}$  wavelength as a function of time and the values of luminance of the target and background at the start of the trials. Negative values indicate the luminance of the background was greater than the luminance of the target. These data are shown graphically in Appendix B and in tabular form in Appendix F.

SECTION 3. APPENDICES

APPENDIX A. TEST CRITERIA

Not Used

## APPENDIX B. TEST DATA

<u>SECTION</u>	<u>TRIAL</u>
B-1	Trial C1
B-2	Trial C2
B-3	Trial E1
B-4	Trial E2
B-5	Trial E3
B-6	Trial D1
B-7	Trial D2
B-8	Trial D3
B-9	Trial D4
B-10	Meteorological Data
B-11	Cloud Dimension Data



APPENDIX B, SECTION 1

CONTENTS

TRIAL C1, DPG DUST ADD-ON, 28 September 1978

PAGE

No Data TABLE: TEST DAY DATA

B-1-2 FIGURE: DOSAGE ALONG SAMPLING LINE

B-1-3 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
9.75  $\mu\text{m}$

B-1-4 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
3.443  $\mu\text{m}$

B-1-5 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
1.06  $\mu\text{m}$

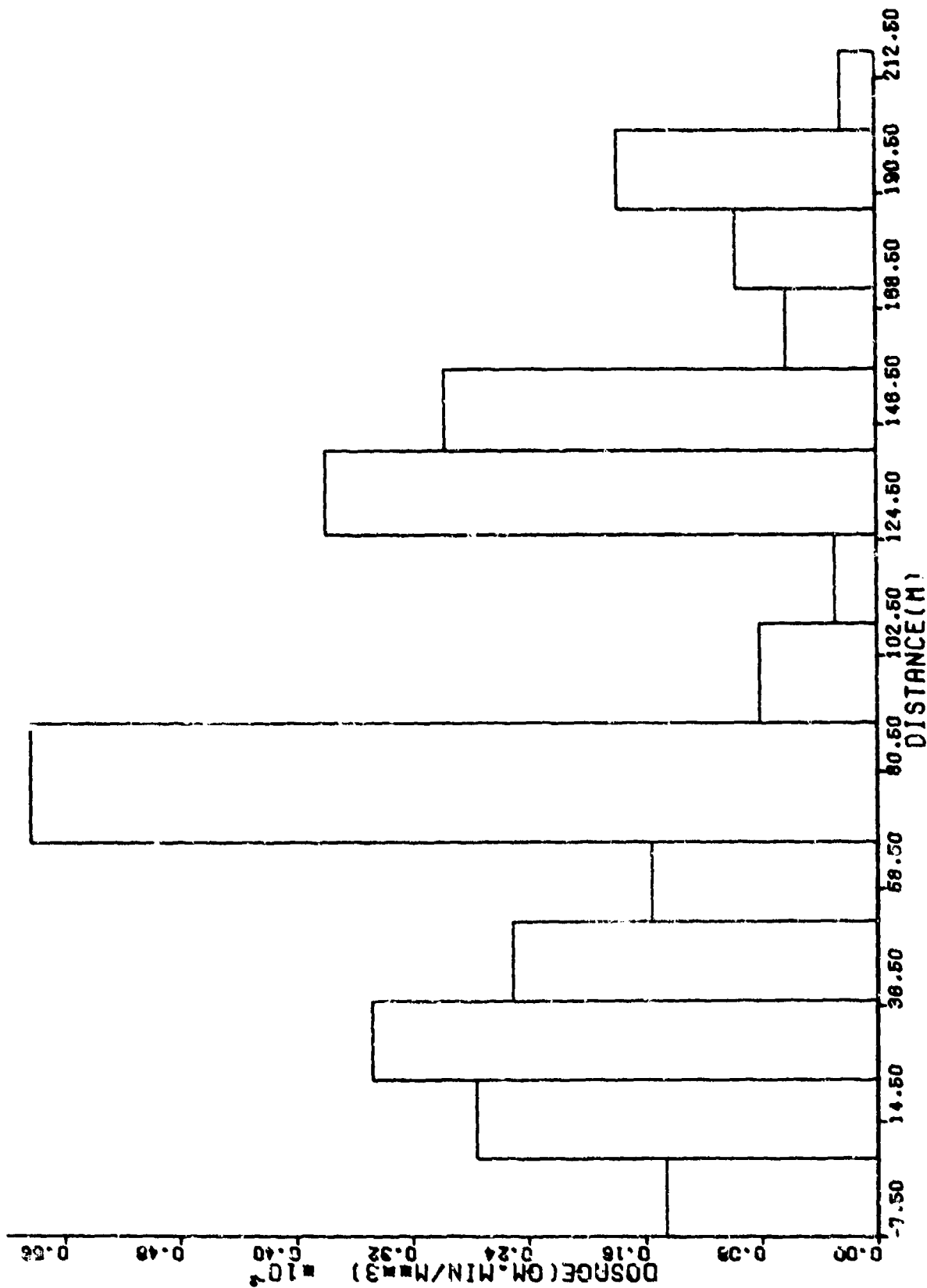
B-1-6 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
0.4-0.7  $\mu\text{m}$

B-1-7 FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH  
1.06  $\mu\text{m}$

B-1-8 FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH  
0.4-0.7  $\mu\text{m}$

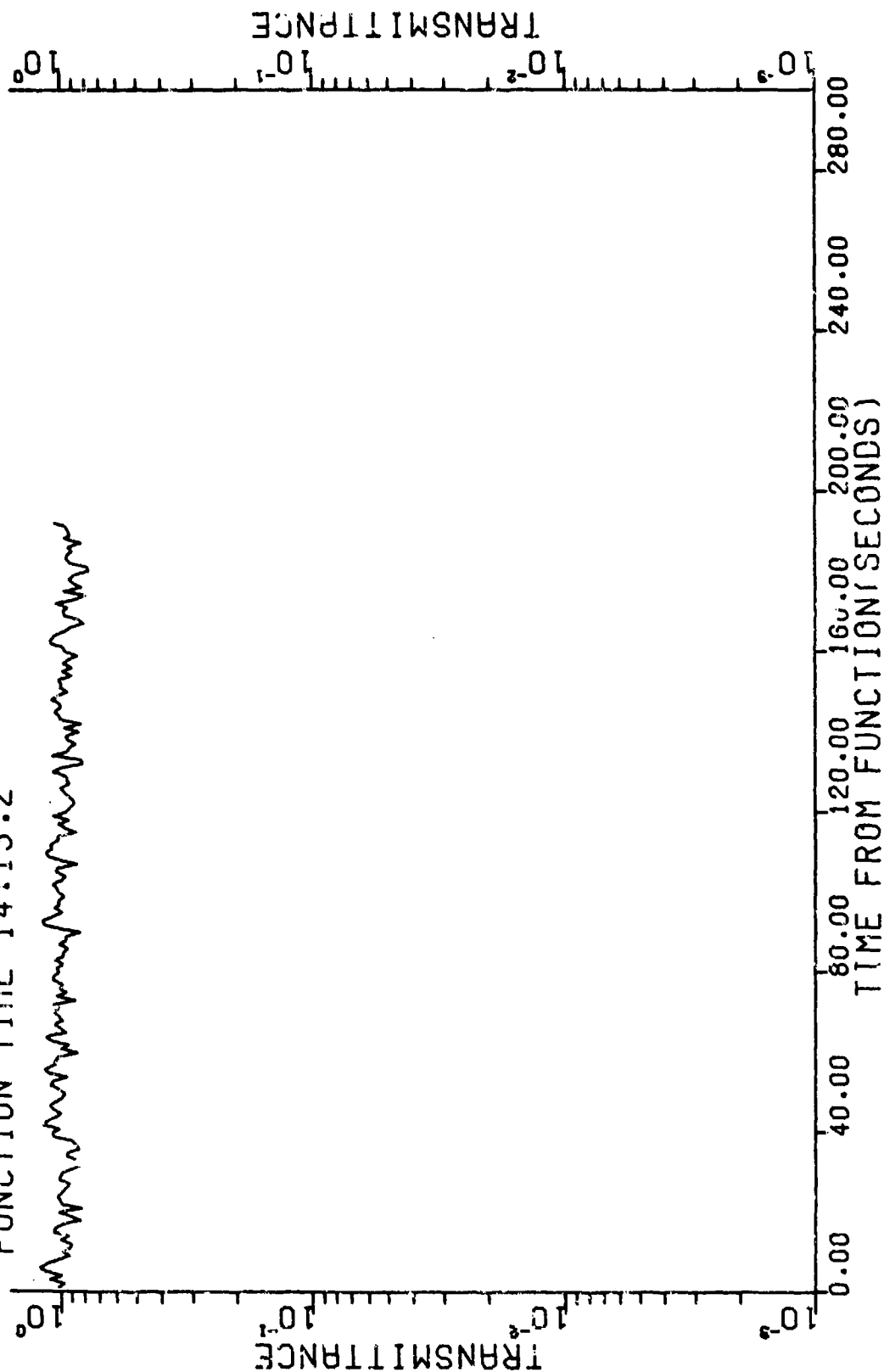
B-1-9 FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH  
0.4-0.7  $\mu\text{m}$

B-1-10 FIGURE: CL VALUES VERSUS TIME



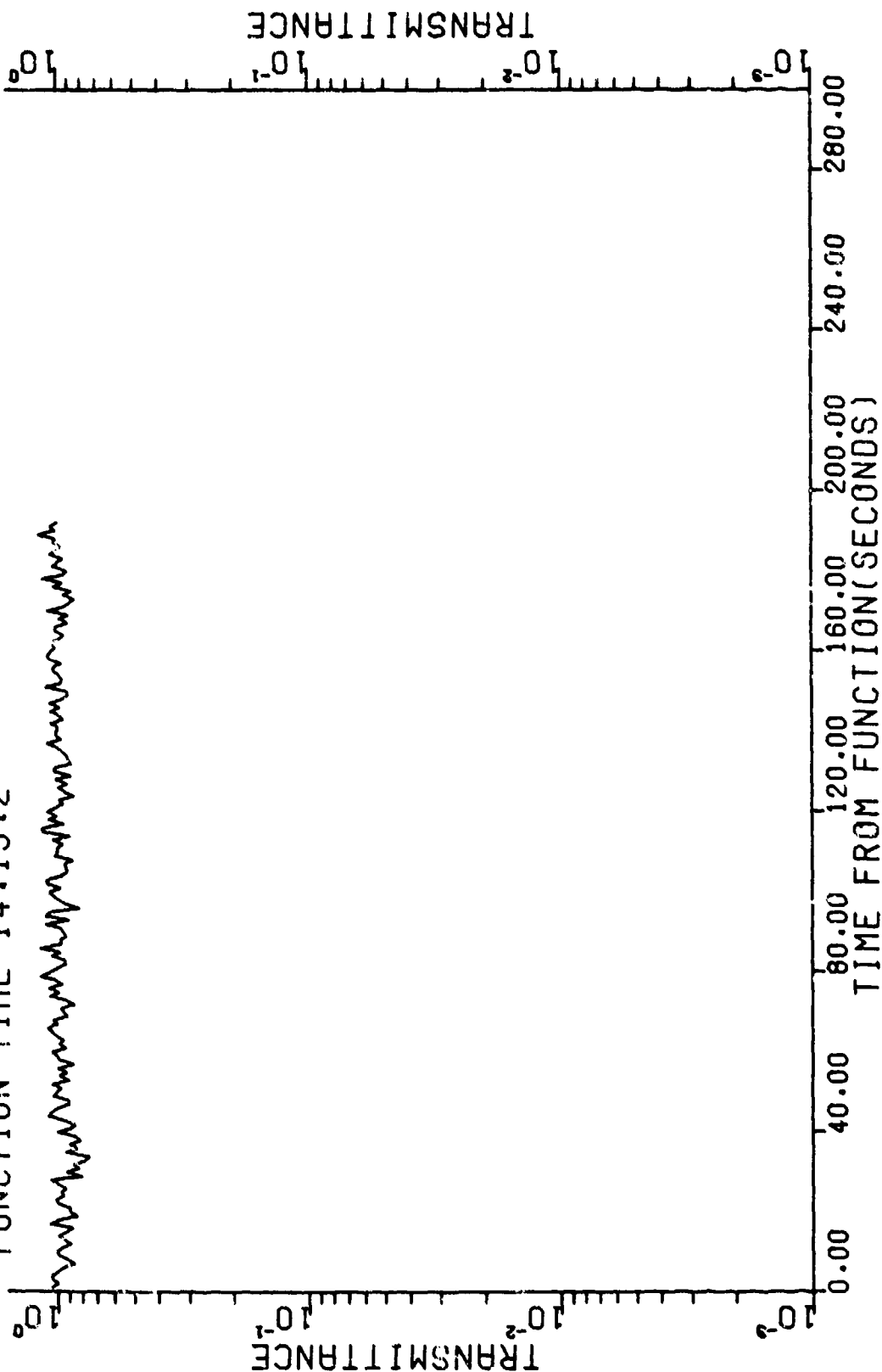
TRIAL C1, DPG DUST ADD-ON, 28 SEP 1978, 14:13:02, DUST

TRIAL #C1 (DP1-005)  
DATE: 28 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 14:13:2



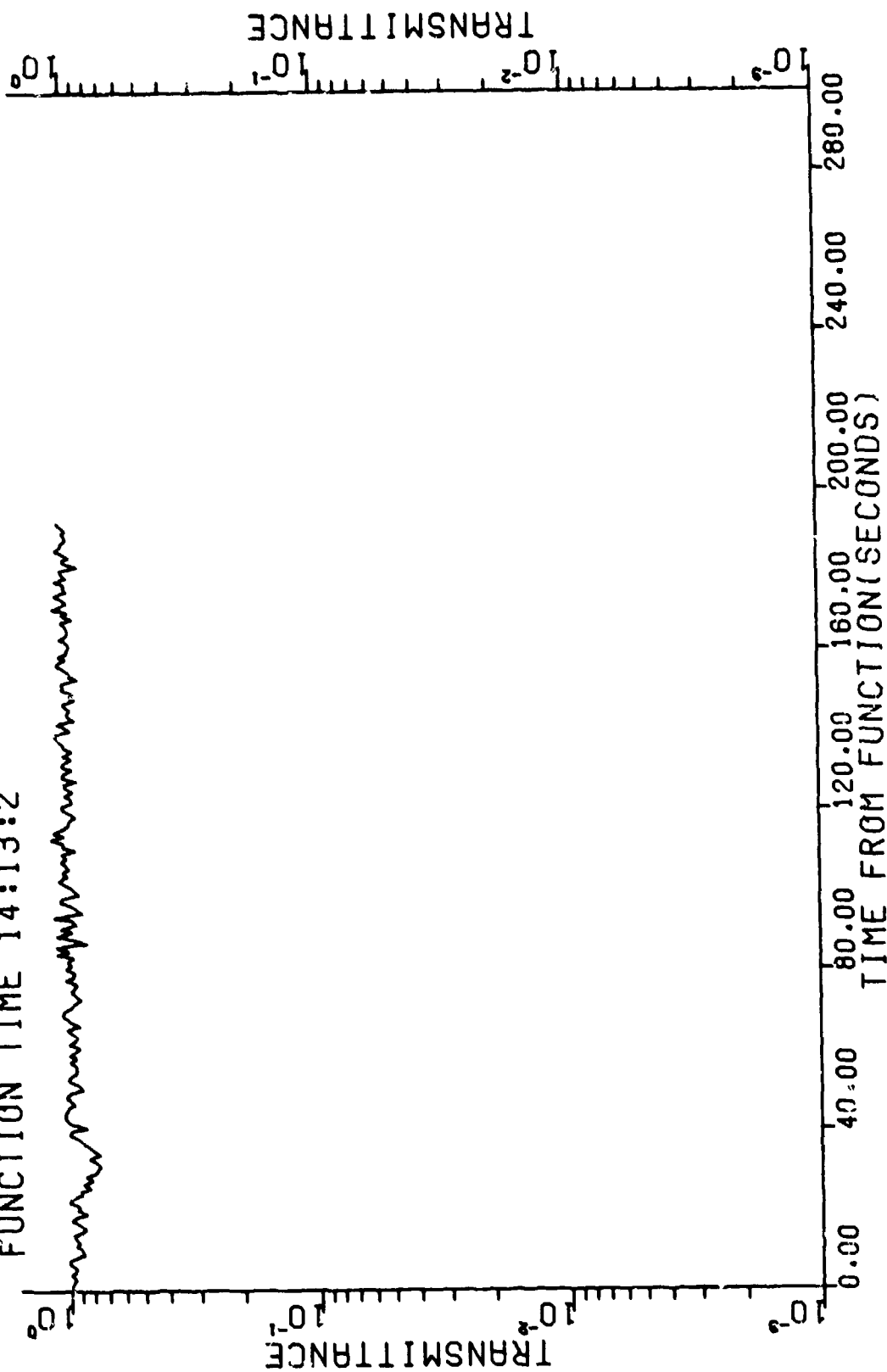
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED ON CENTER ROW

TRIAL #C1 (DP1-005)  
DATE: 28 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 14:13:2



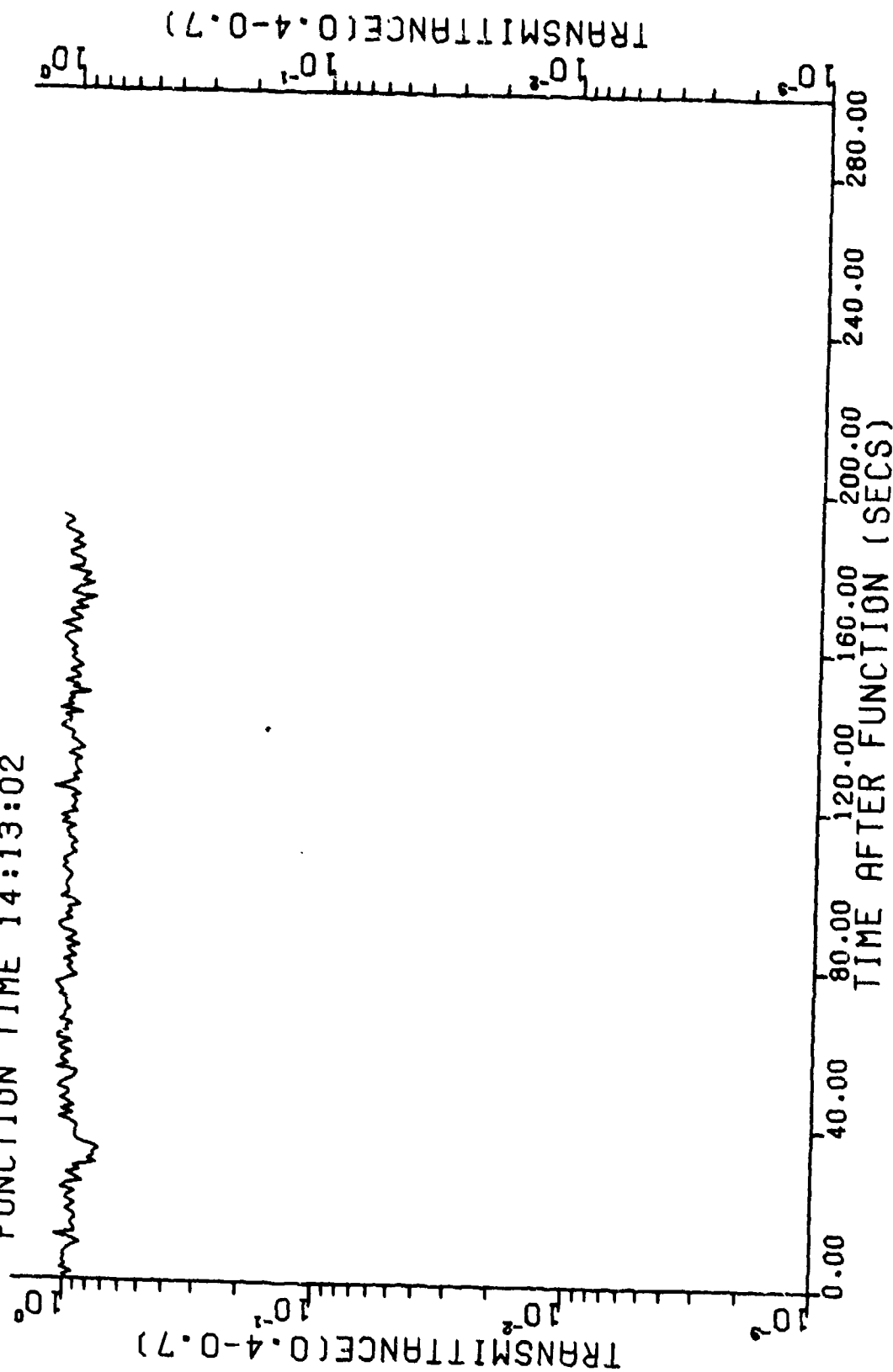
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED ( CENTER ROW

TRIAL #C1 (DP1-005)  
DATE: 28 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 14:13:2



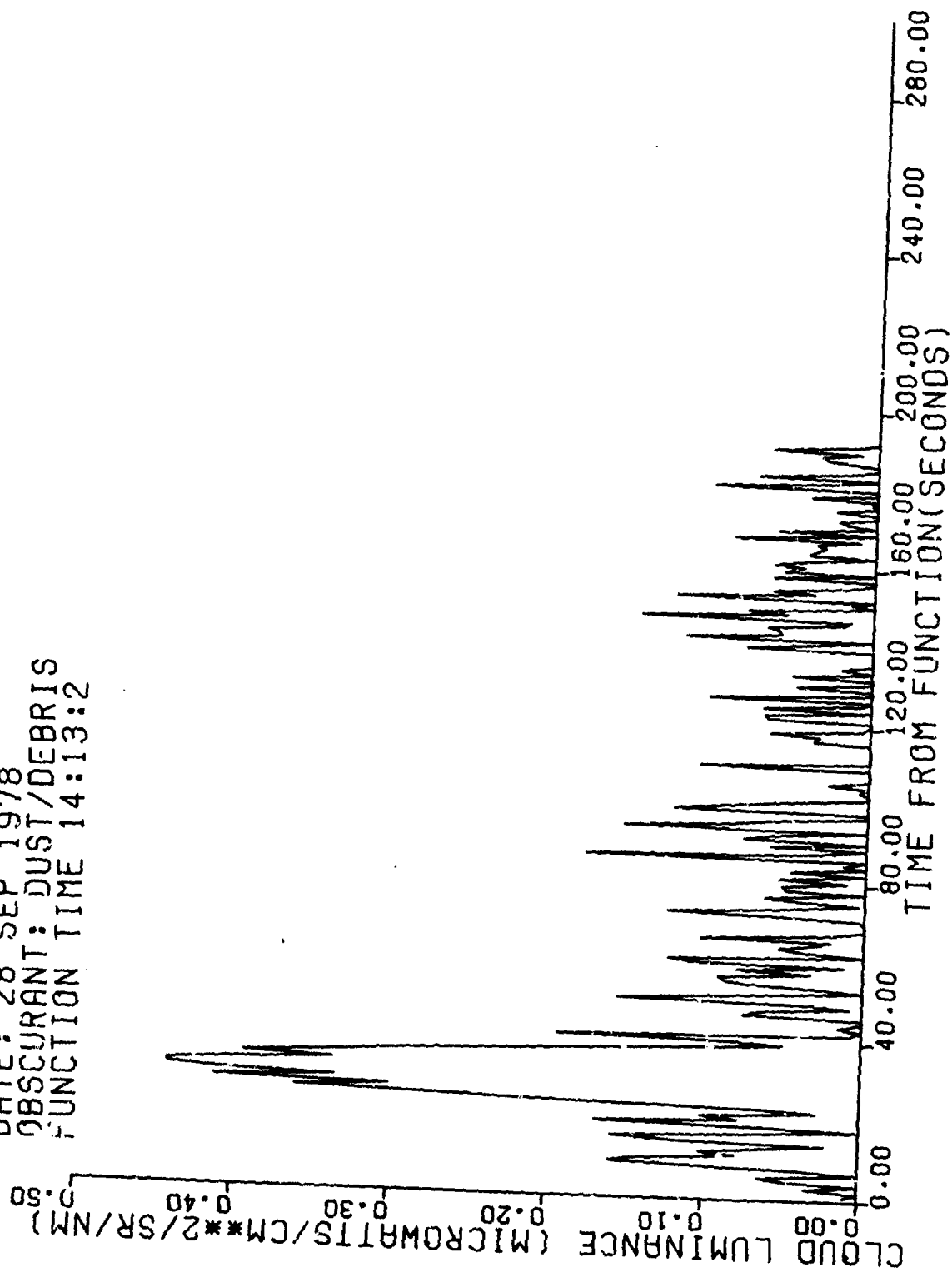
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

TRIAL C1, DPG DUST ADDON  
 DATE: 28 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 14:13:02



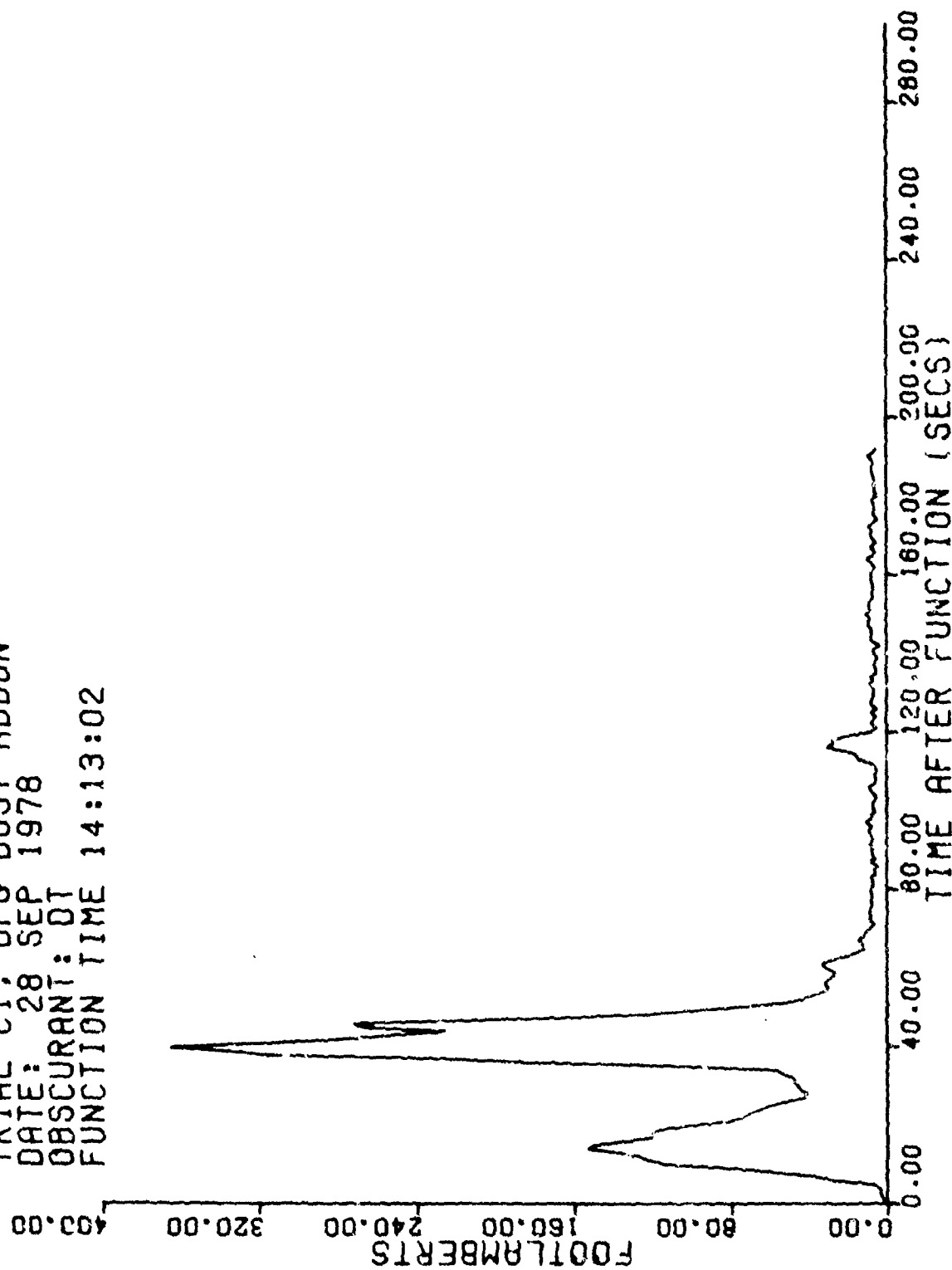
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #C1 (DP1-005)  
 DATE: 28 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 14:13:2



CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

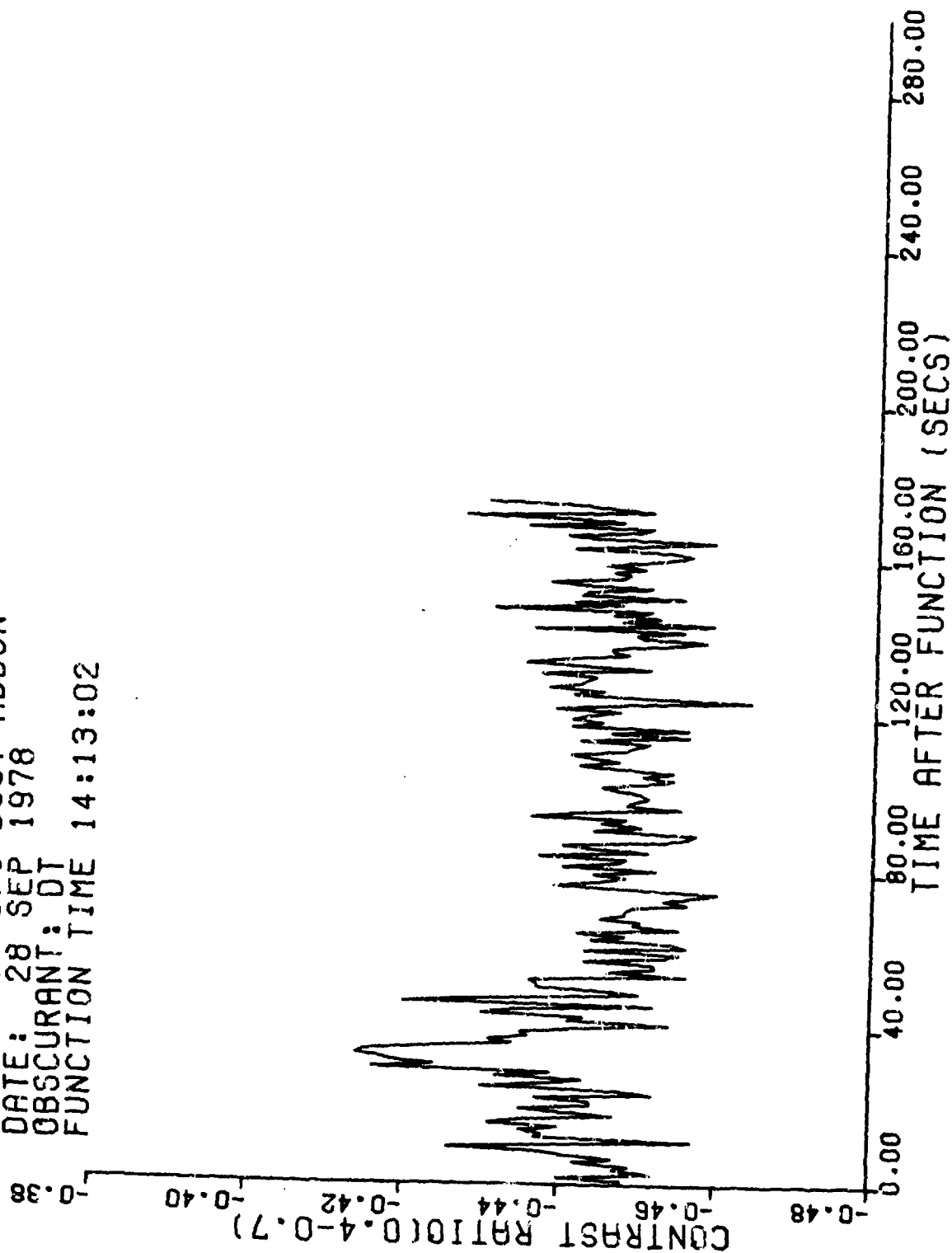
TRIAL C1, DPG DUST ADDON  
DATE: 28 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 14:13:02



CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW



TRIAL C1: DPG DUST ADDON  
 DATE: 28 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 14:13:02



CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL \*C1 (DP1-005)  
 DATE: 28 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 14:13:2

CL (CM/M\*\*2)  
 0.00 10.00 20.00 30.00 40.00 50.00

0.00 40.00 80.00 120.00 150.00 200.00 240.00 280.00  
 TIME FROM FUNCTION(SECONDS)

CL VALUES VERSUS TIME FOR CENTER ROW  
 CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

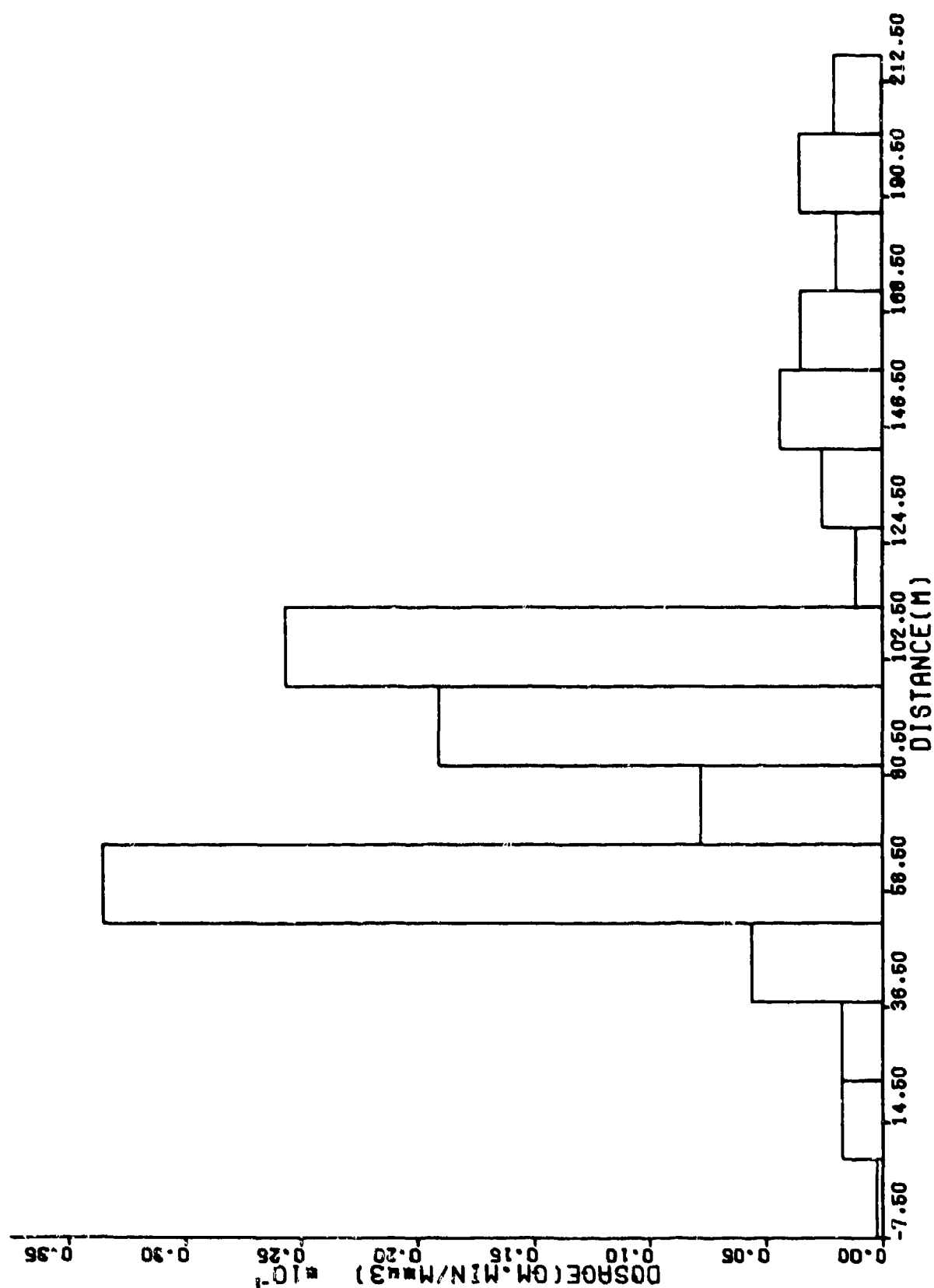
APPENDIX B, SECTION 2

CONTENTS

TRIAL C2, DPG DUST ADD-ON, 29 September 1978

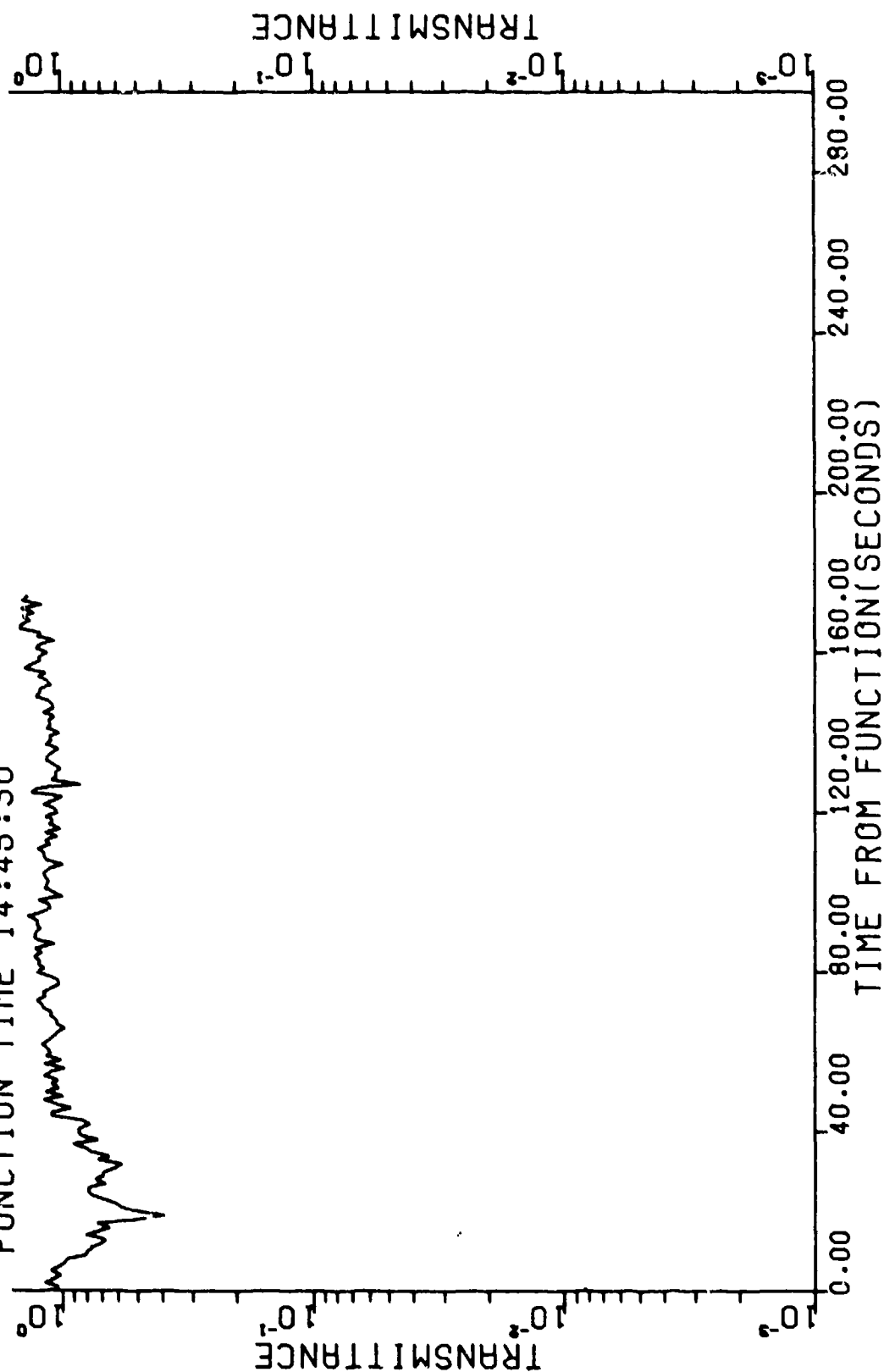
PAGE

No Data	TABLE:	TEST DAY DATA
B-2-2	FIGURE:	DOSAGE ALONG SAMPLING LINE
B-2-3	FIGURE:	TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu\text{m}$
B-2-4	FIGURE:	TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu\text{m}$
B-2-5	FIGURE:	TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-2-6	FIGURE:	TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-2-7	FIGURE:	CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-2-8	FIGURE:	CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-2-9	FIGURE:	CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-2-10	FIGURE:	CL VALUES VERSUS TIME



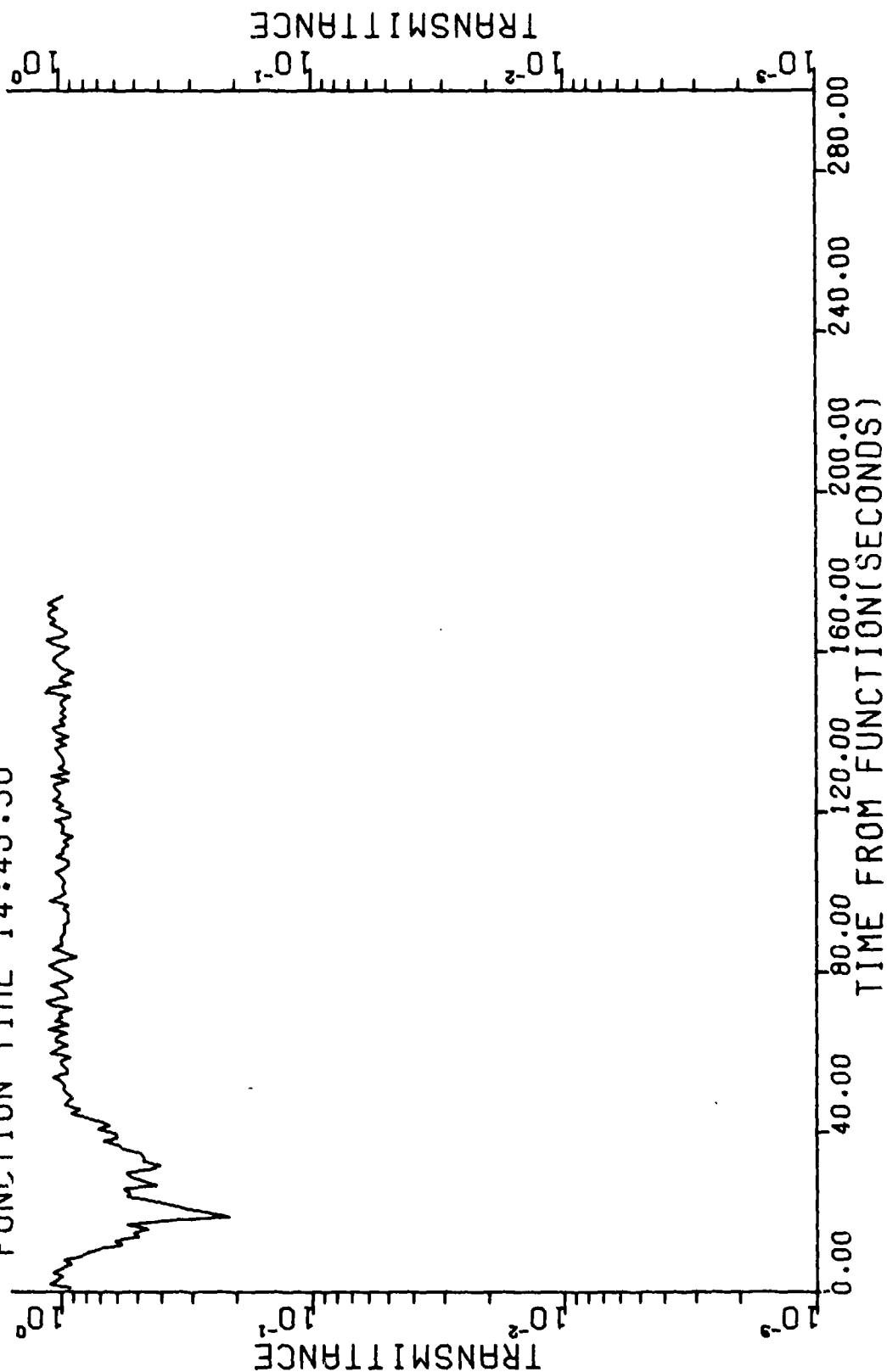
TRIAL C2, DPG DUST ADD-ON, 29 SEP 1978, 14:45:30, DUST

TRIAL #C2 (DP1-005)  
DATE: 29 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 14:45:30



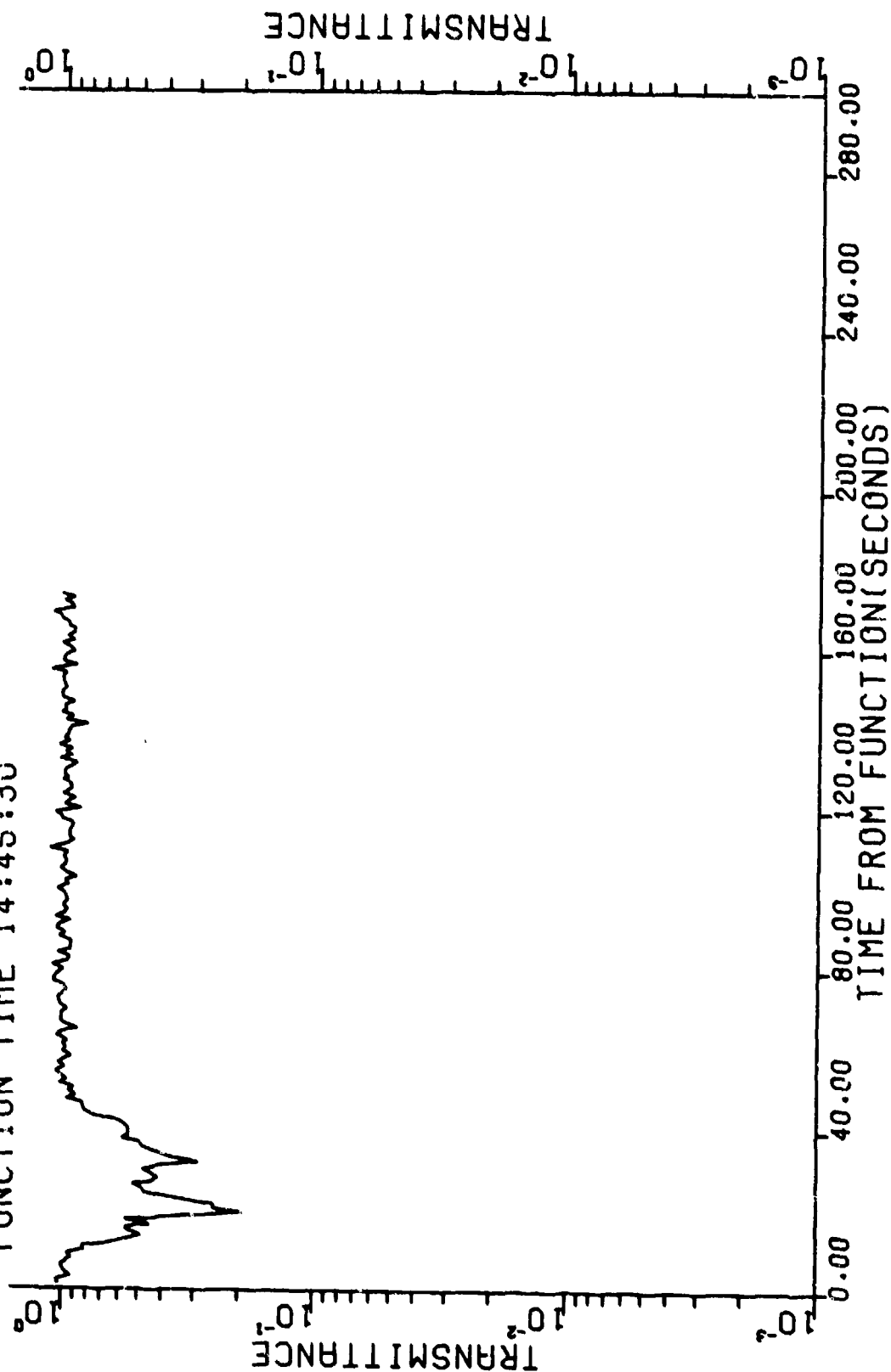
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ M LOCATED ON CENTER ROW

TRIAL #C2 (DP1-005)  
DATE: 29 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 14:45:30



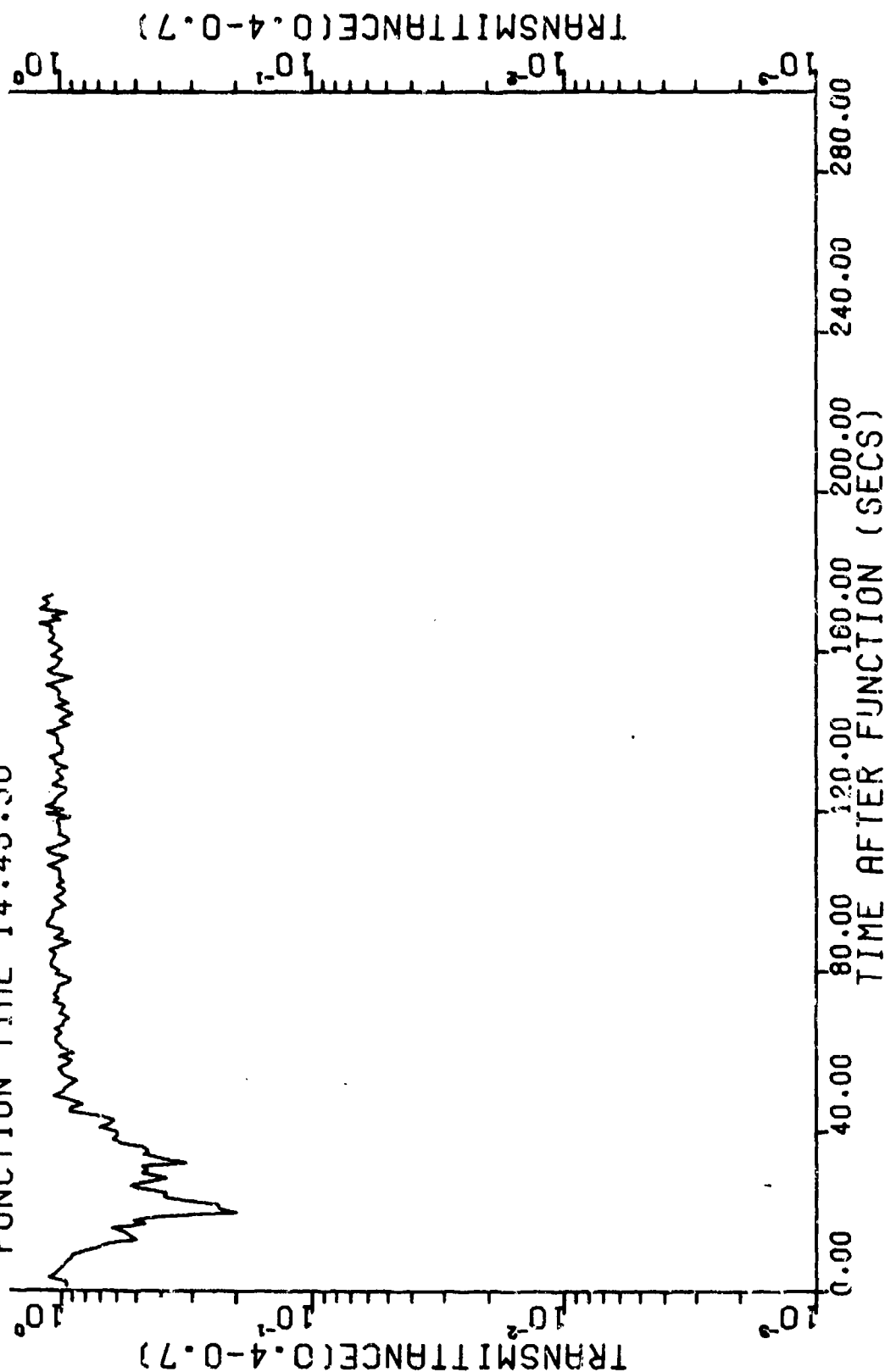
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED C CENTER ROW

TRIAL #C2 (DP1-005)  
DATE: 29 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 14:45:30



TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

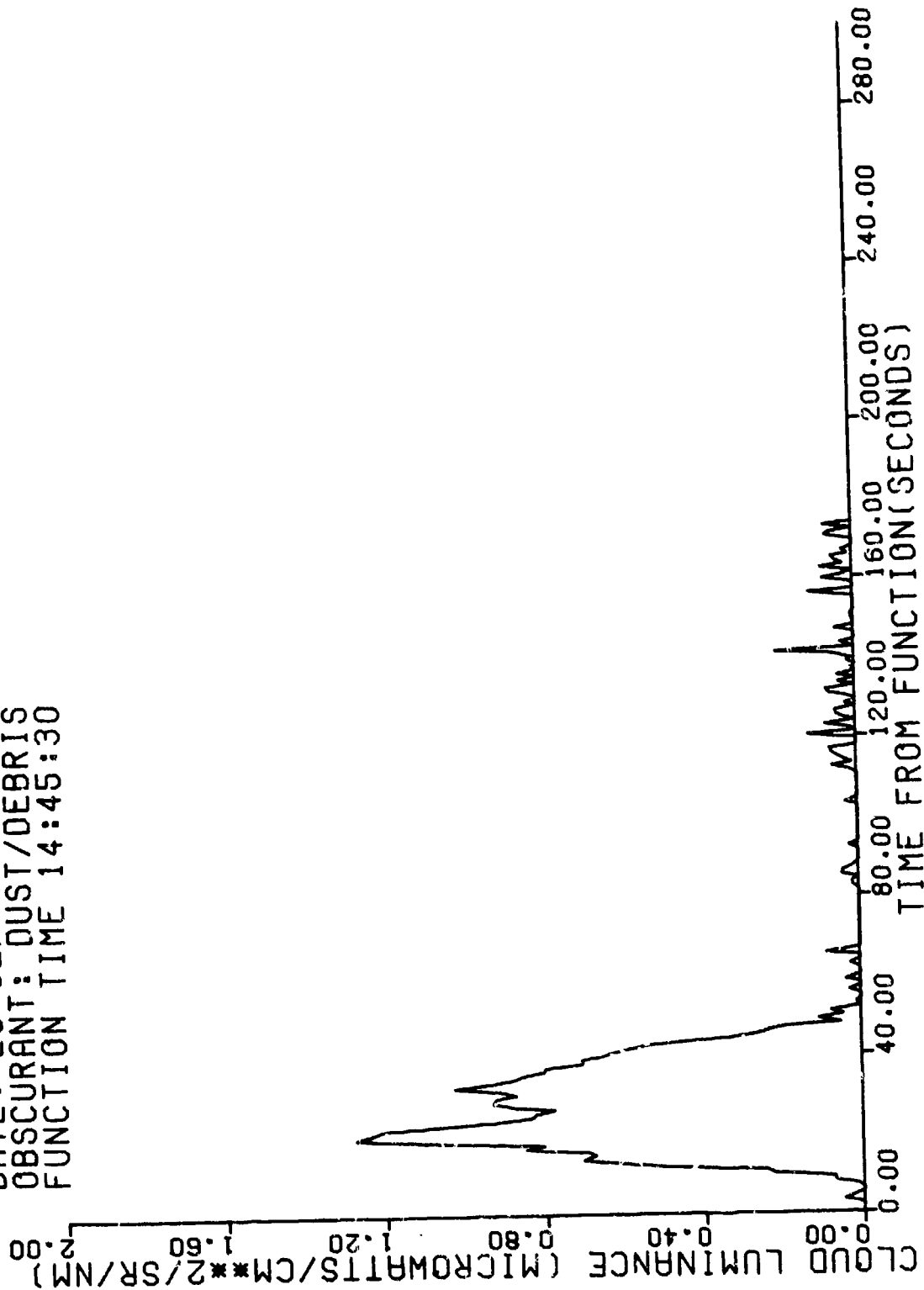
TRIAL C2: DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 14:45:30



TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEAS RED ALONG CENTER ROW

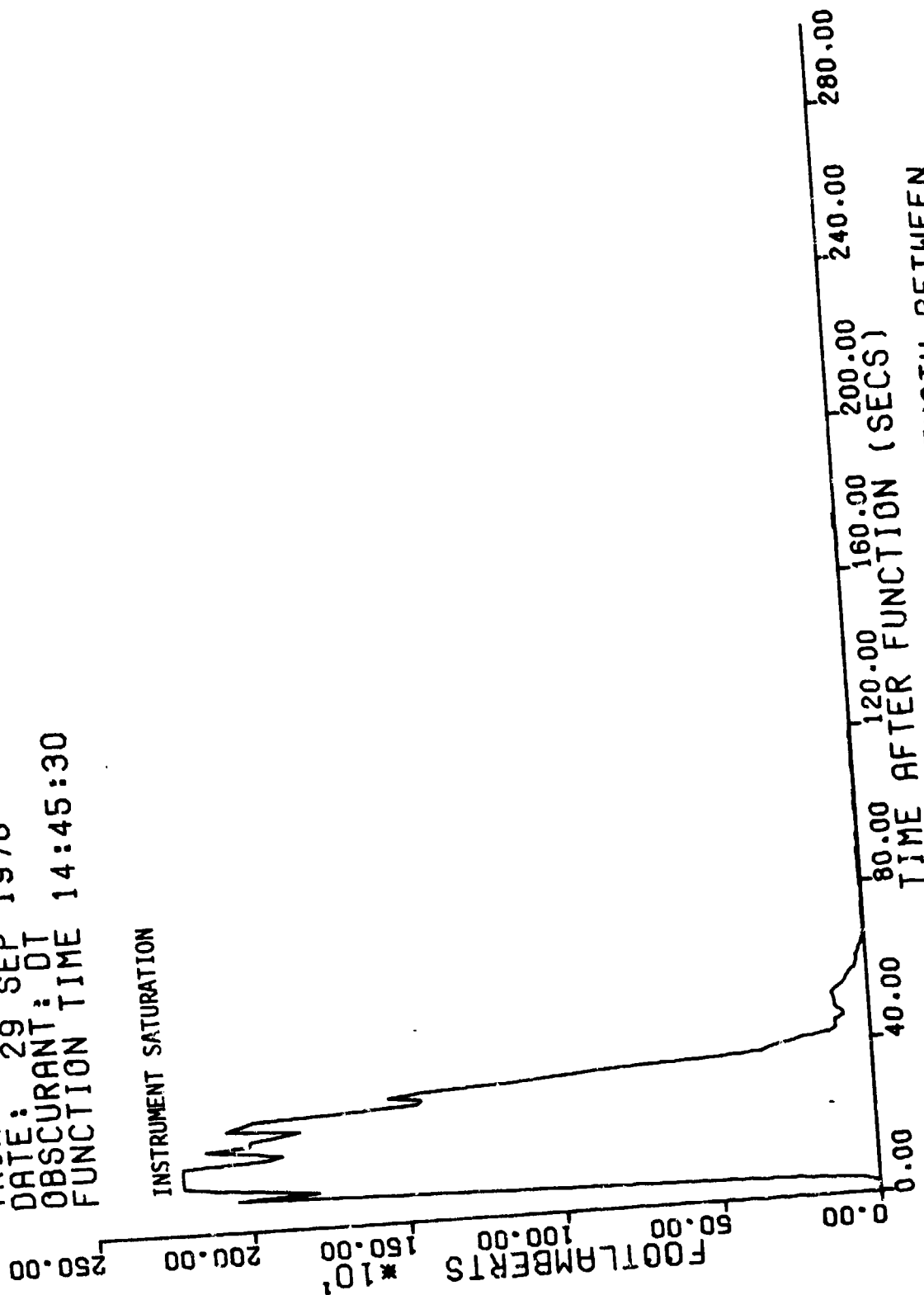


TRIAL #C2 (DP1-005)  
 DATE: 29 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 14:45:30



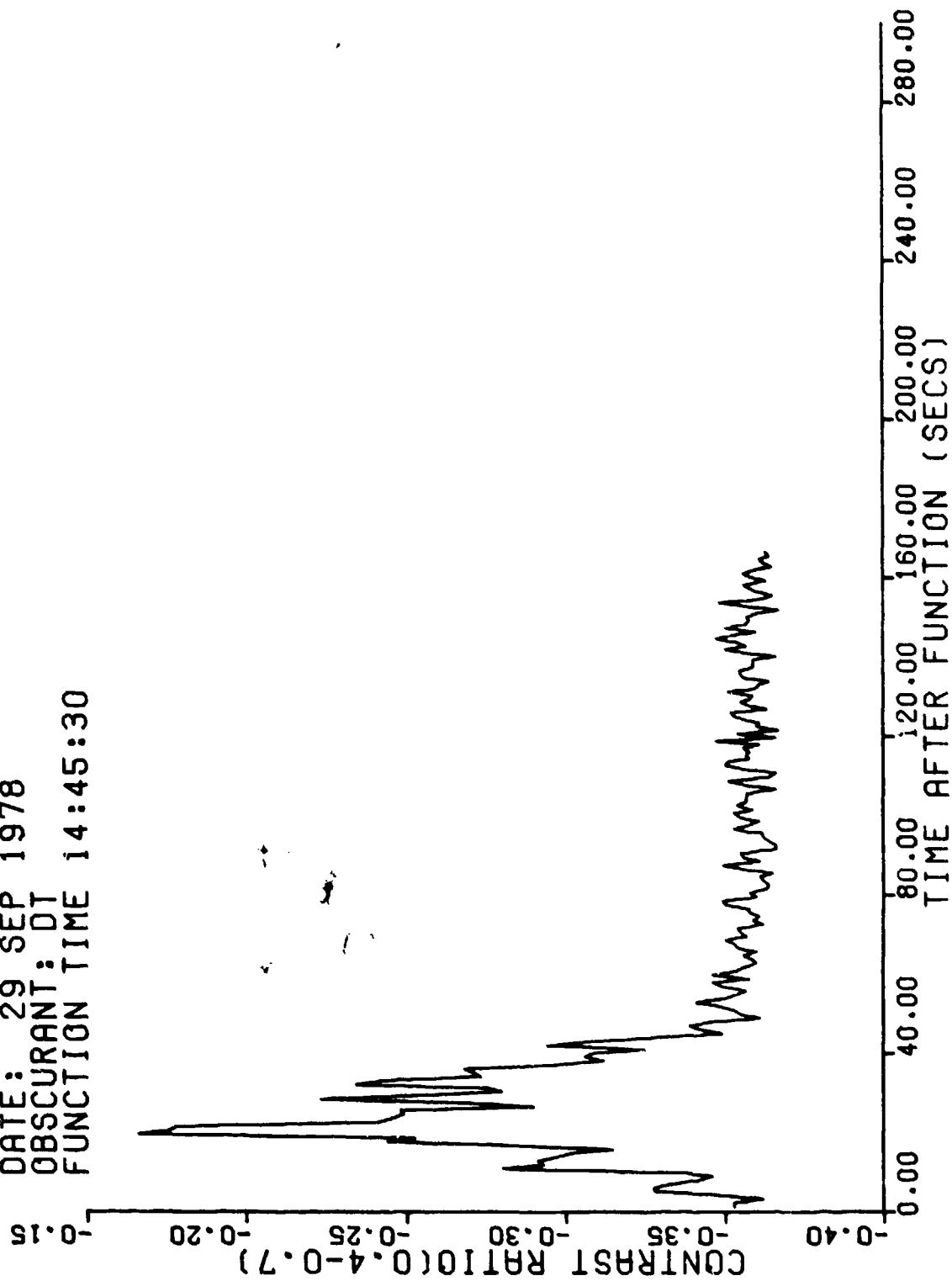
CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

TRIAL C2, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: OT  
FUNCTION TIME 14:45:30



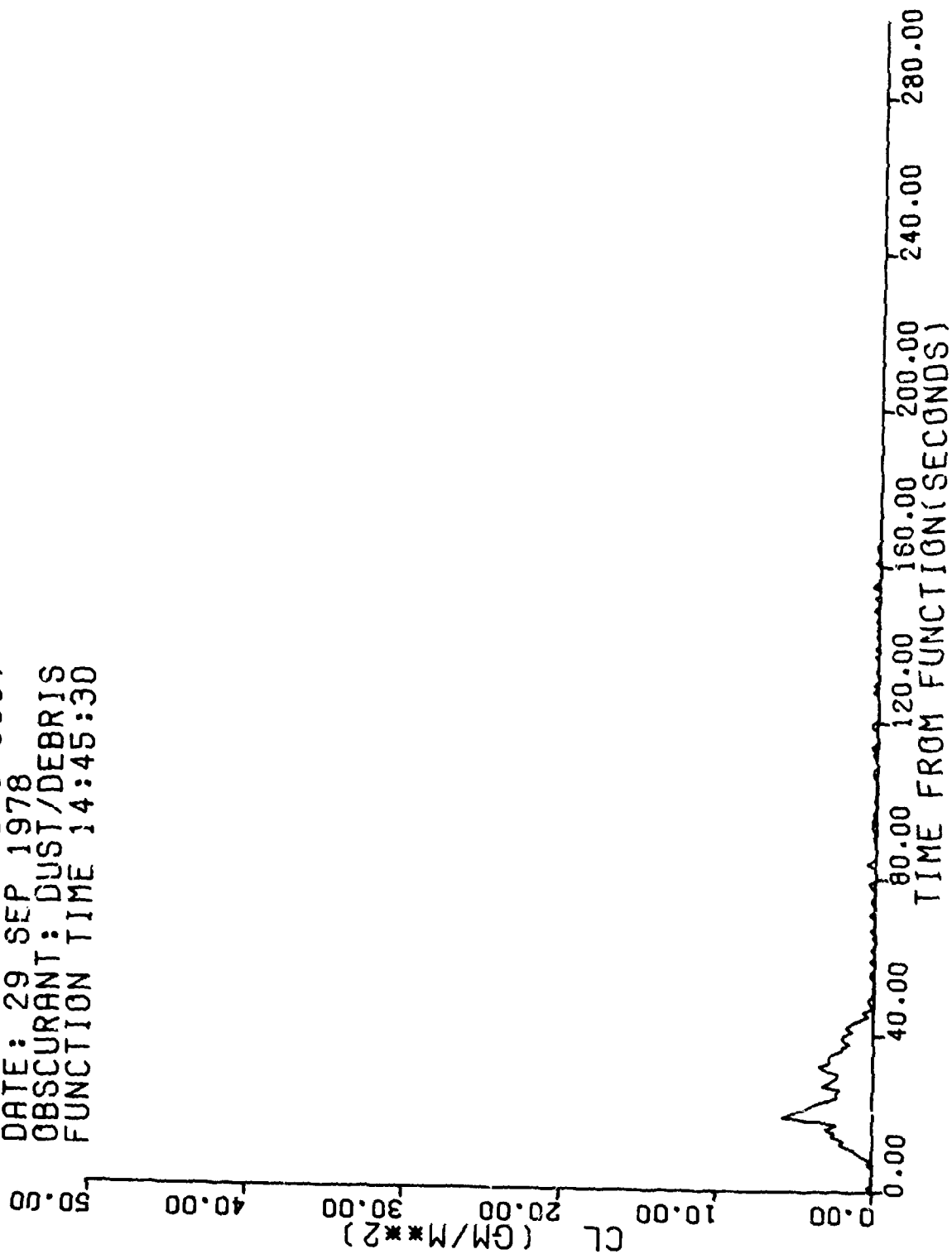
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL C2, DPG DUST ADDON  
 DATE: 29 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 14:45:30



CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #C2 (DP1-005)  
 DATE: 29 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 14:45:30



CL VALUES VERSUS TIME FOR CENTER ROW  
 CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

APPENDIX B, SECTION 3

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TRIAL E1, DPG DUST ADD-ON, 25 September 1978

PAGE	
B-3-2	TABLE: TEST DAY DATA
B-3-3	FIGURE: DOSAGE ALONG SAMPLING LINE
B-3-4	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu\text{m}$
B-3-5	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu\text{m}$
B-3-6	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-3-7	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-3-8	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-3-9	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-3-10	FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-3-11	FIGURE: CL VALUES VERSUS TIME
B-3-12	FIGURE: MUNITION LOCATION

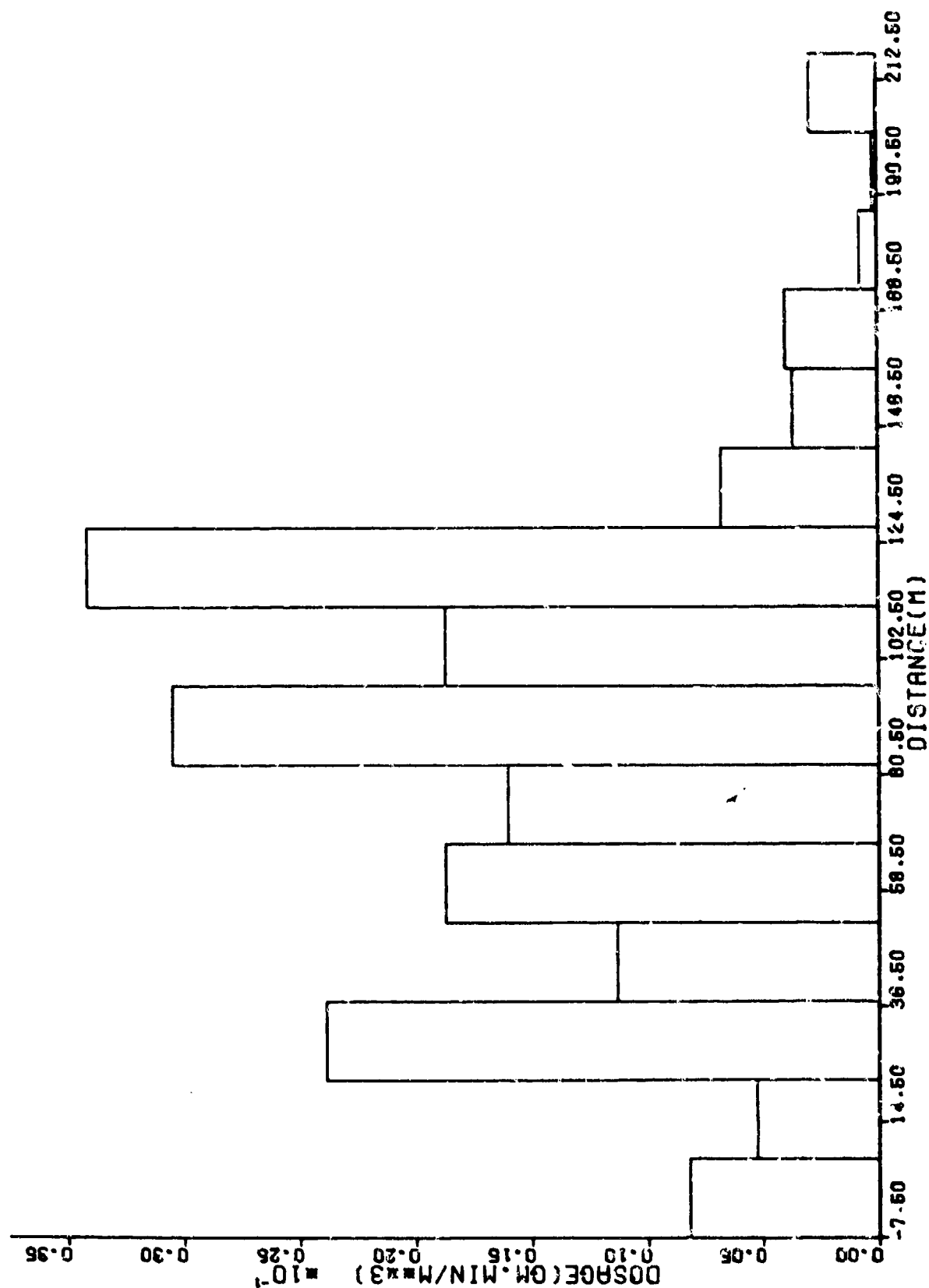
IDENTIFICATION:

Trial Number: E1 (DP1-005)  
Date of Trial: 25 Sept 78  
Function Time: 13:55:10

<u>Particle Size Range (<math>\mu\text{m}</math>)</u>	<u>Proportion %</u>
0.65 - 1.3	48
1.3 - 2.3	21
2.3 - 10.0	30
10.0 - 15.0	0
15.0 - 20.0	0
> - 20.0	0

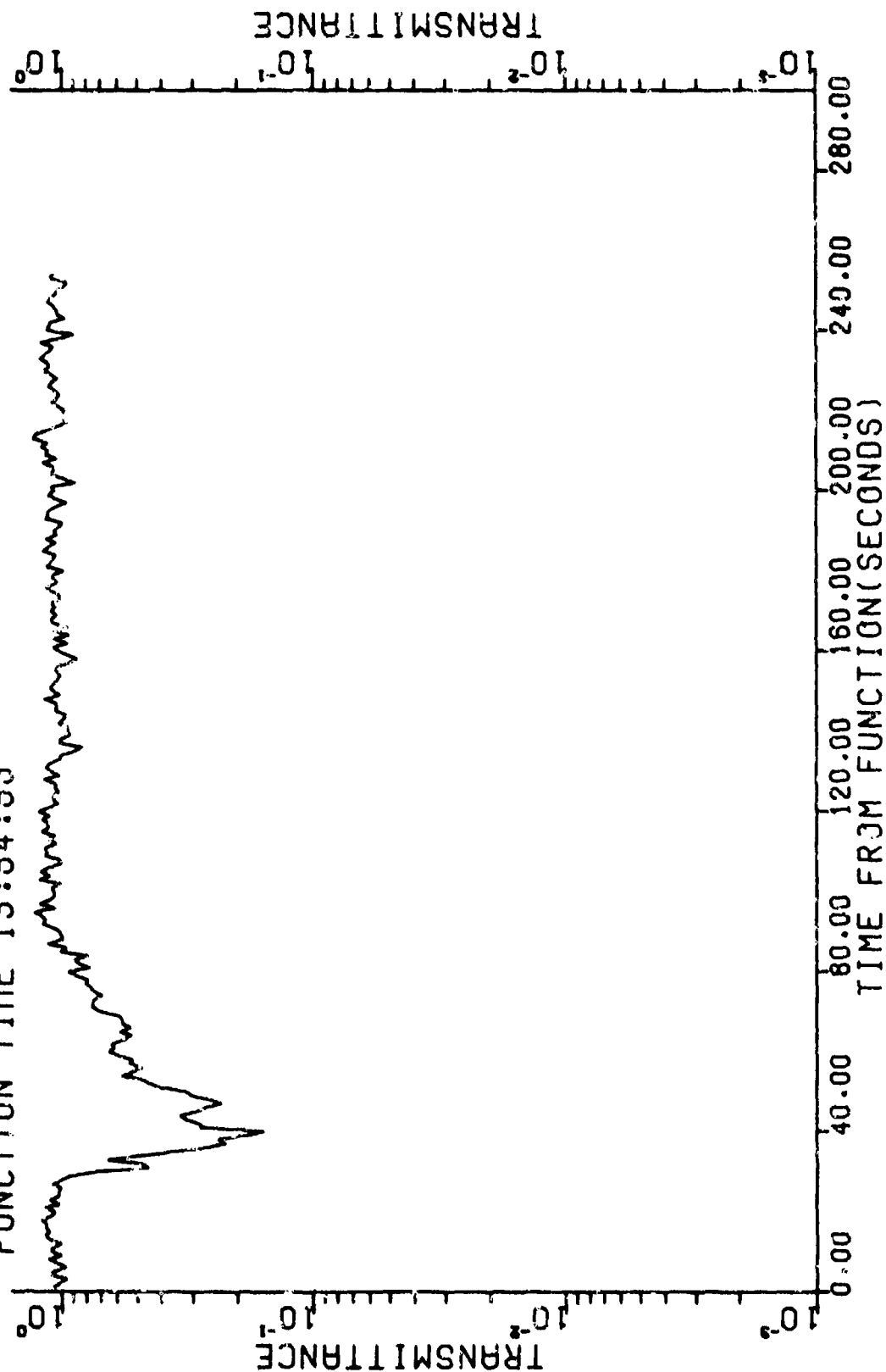
NMD ( $\mu\text{m}$ )\* 1.4

\*Data was reduced manually. NMD is based on graphical estimate.



TRIAL E1, DPG DUST ADD-ON, 25 SEP 1978, 13:55:10, DUST

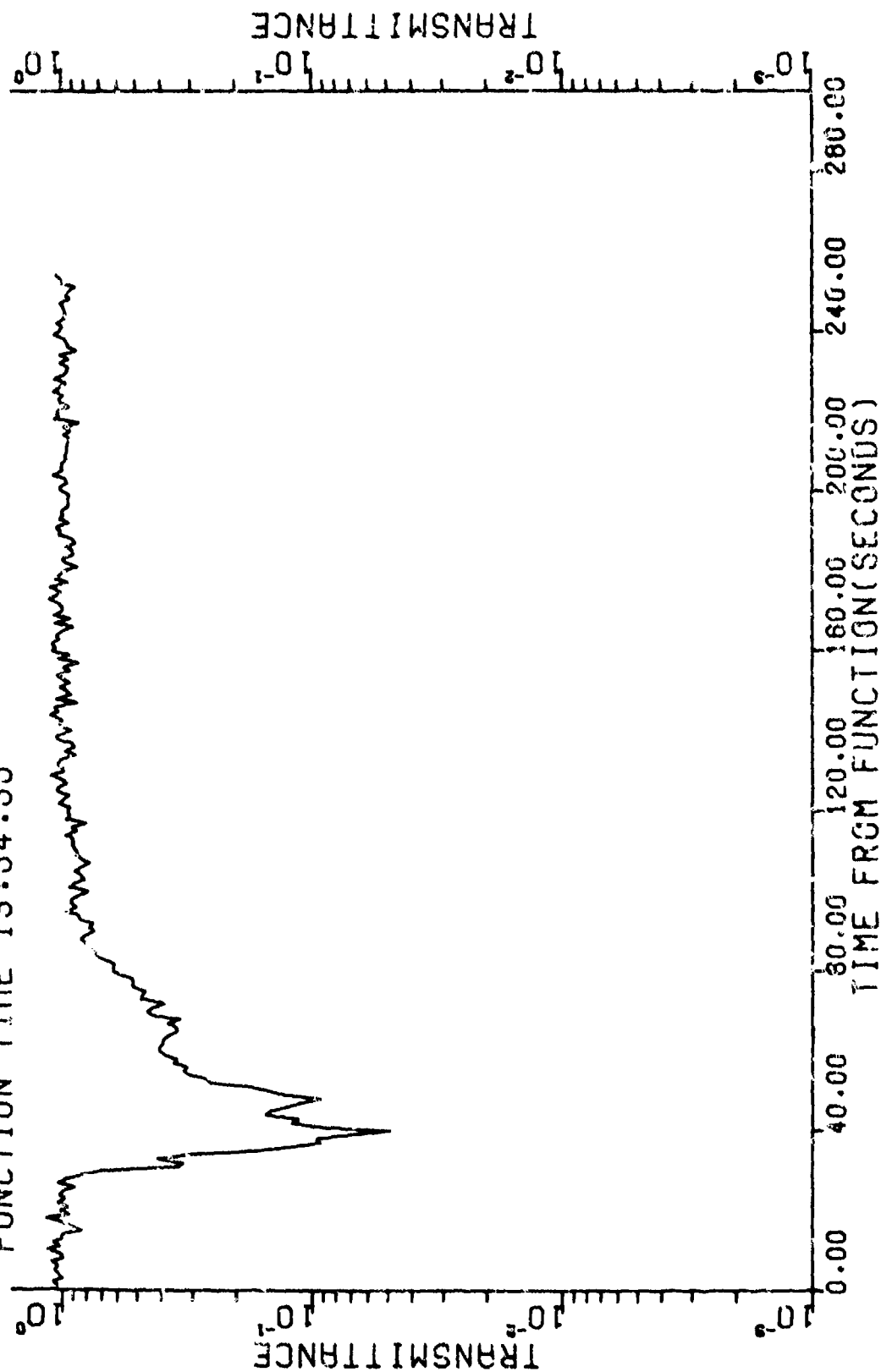
TRIAL #E1 (DP1-005)  
DATE: 25 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:54:55



TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED C CENTER ROW

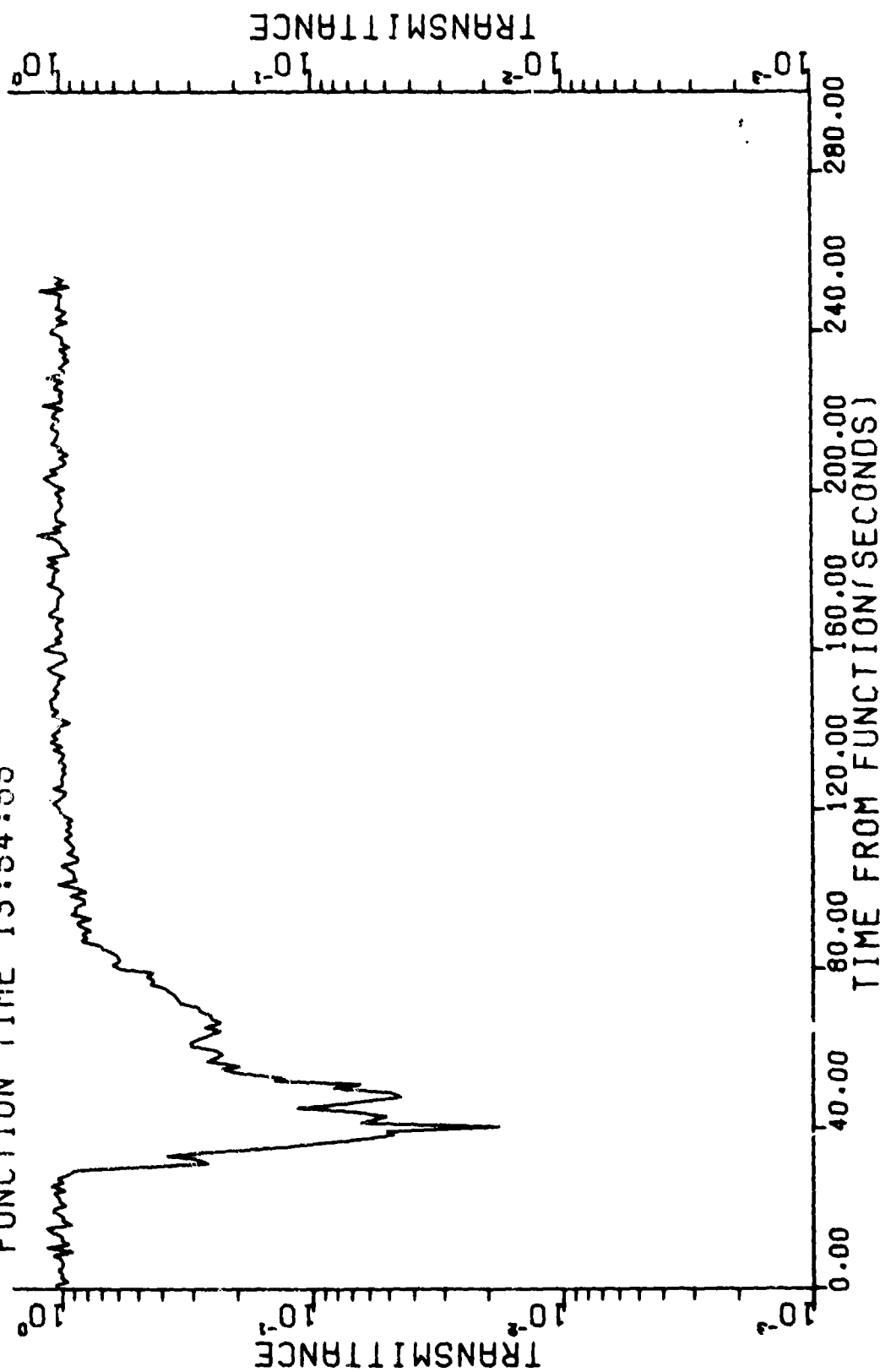


TRIAL #E1 (DP1-005)  
DATE: 25 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:54:55



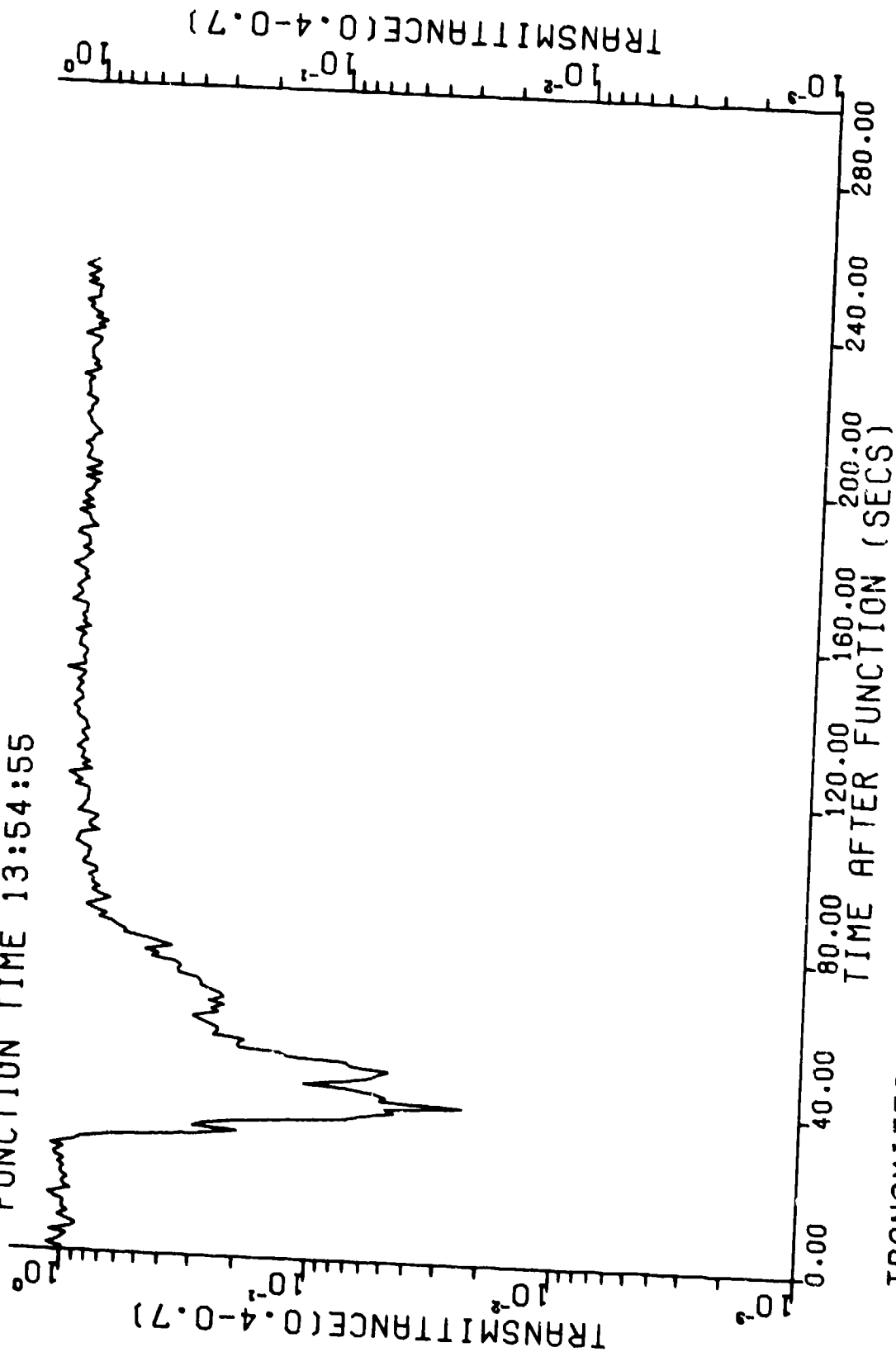
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED ON CENTER ROW

TRIAL #E1 (DP1-005)  
DATE: 25 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:54:55



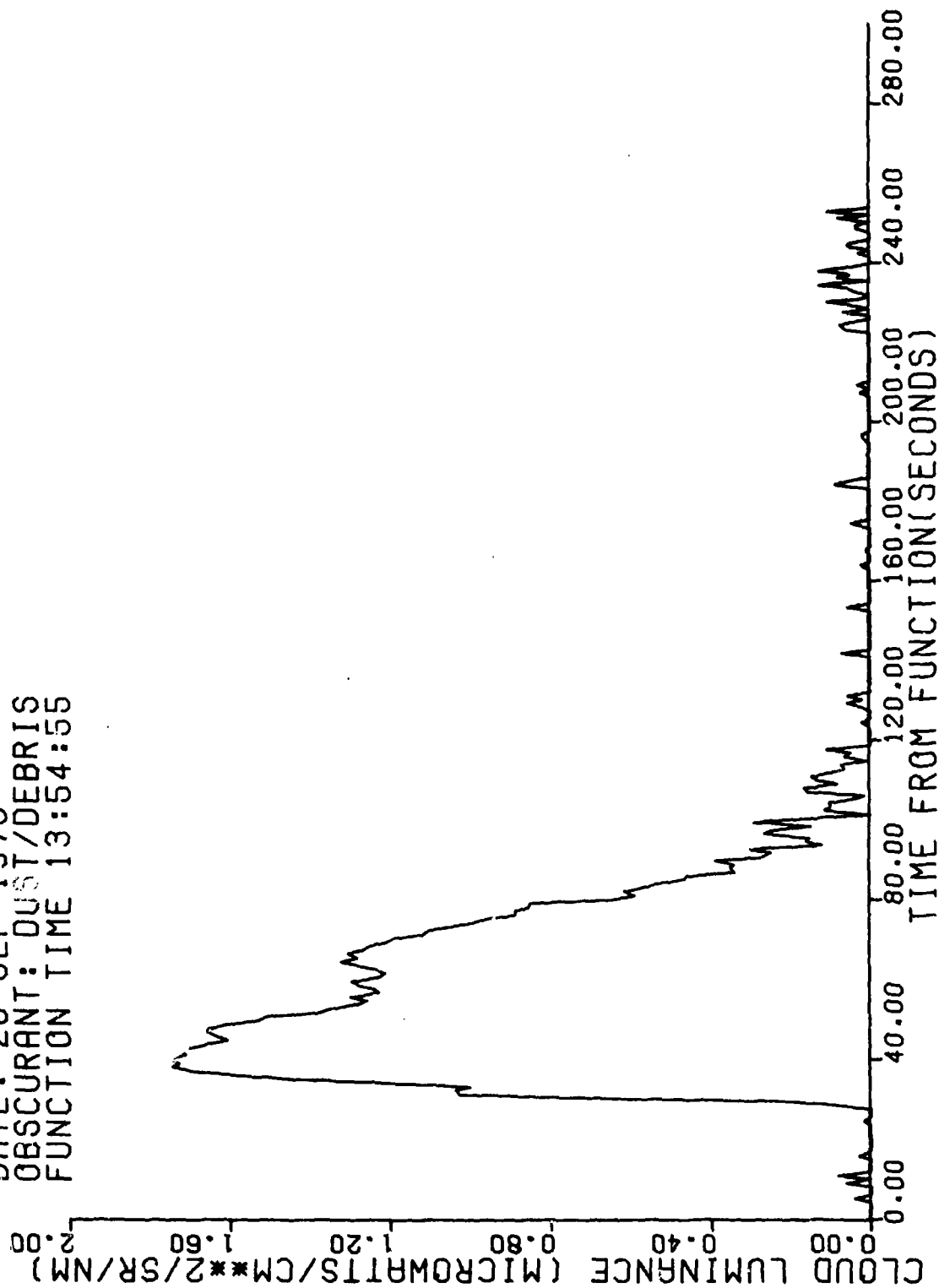
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LATED ON CENTER ROW

TRIAL E1: DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55



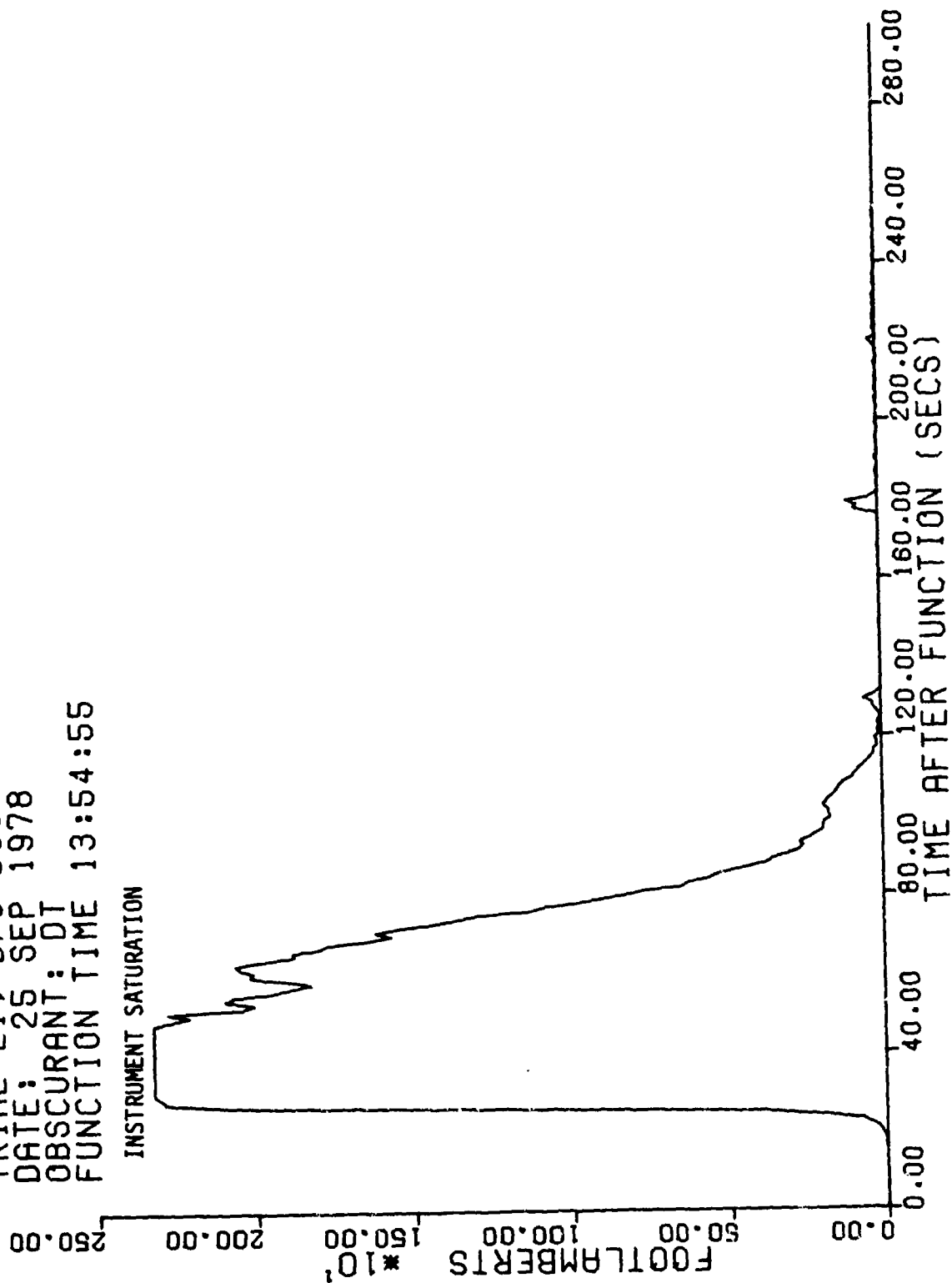
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #E1 (DP1-005)  
 DATE: 25 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 13:54:55



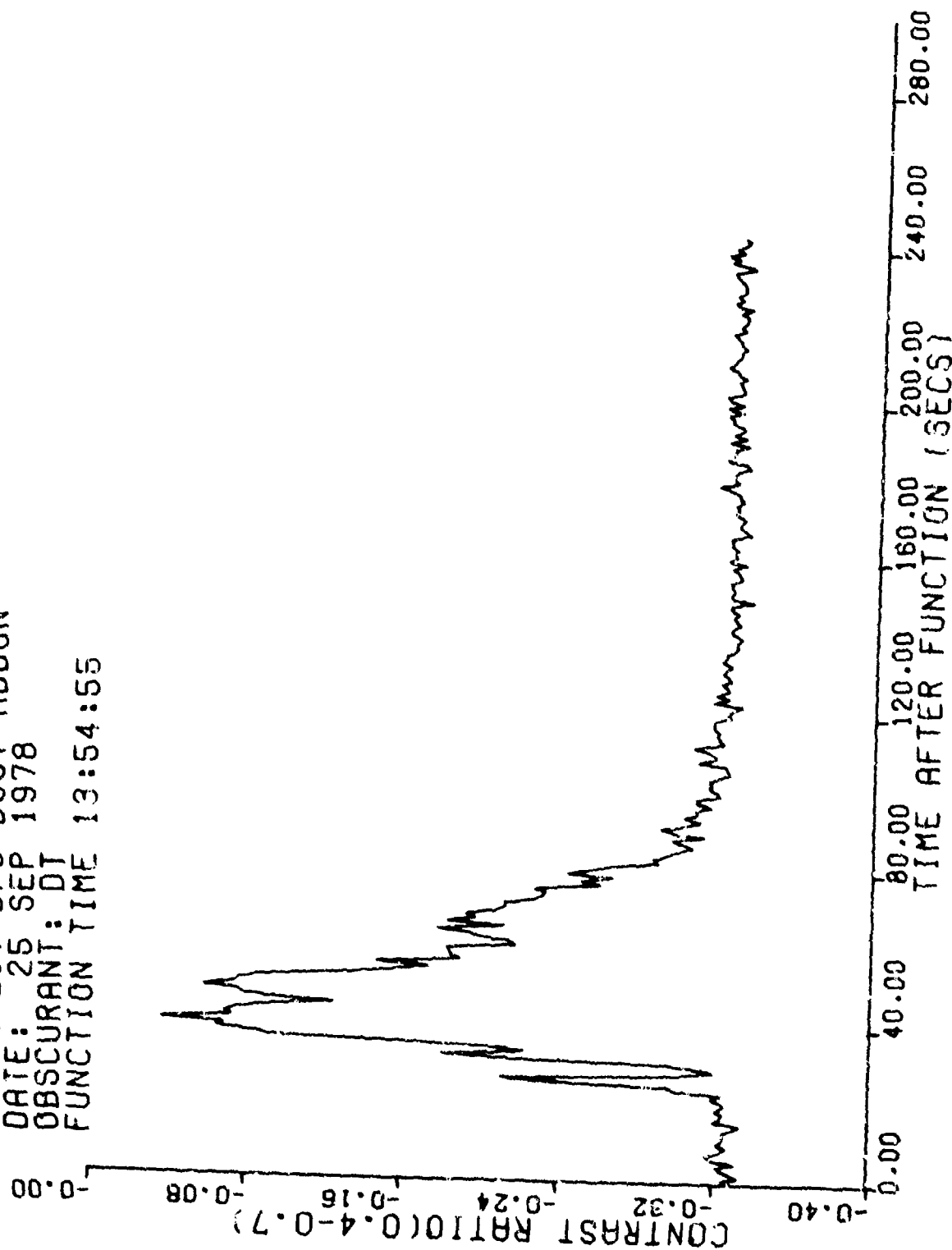
CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060μm LIATED ON CENTER ROW

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55



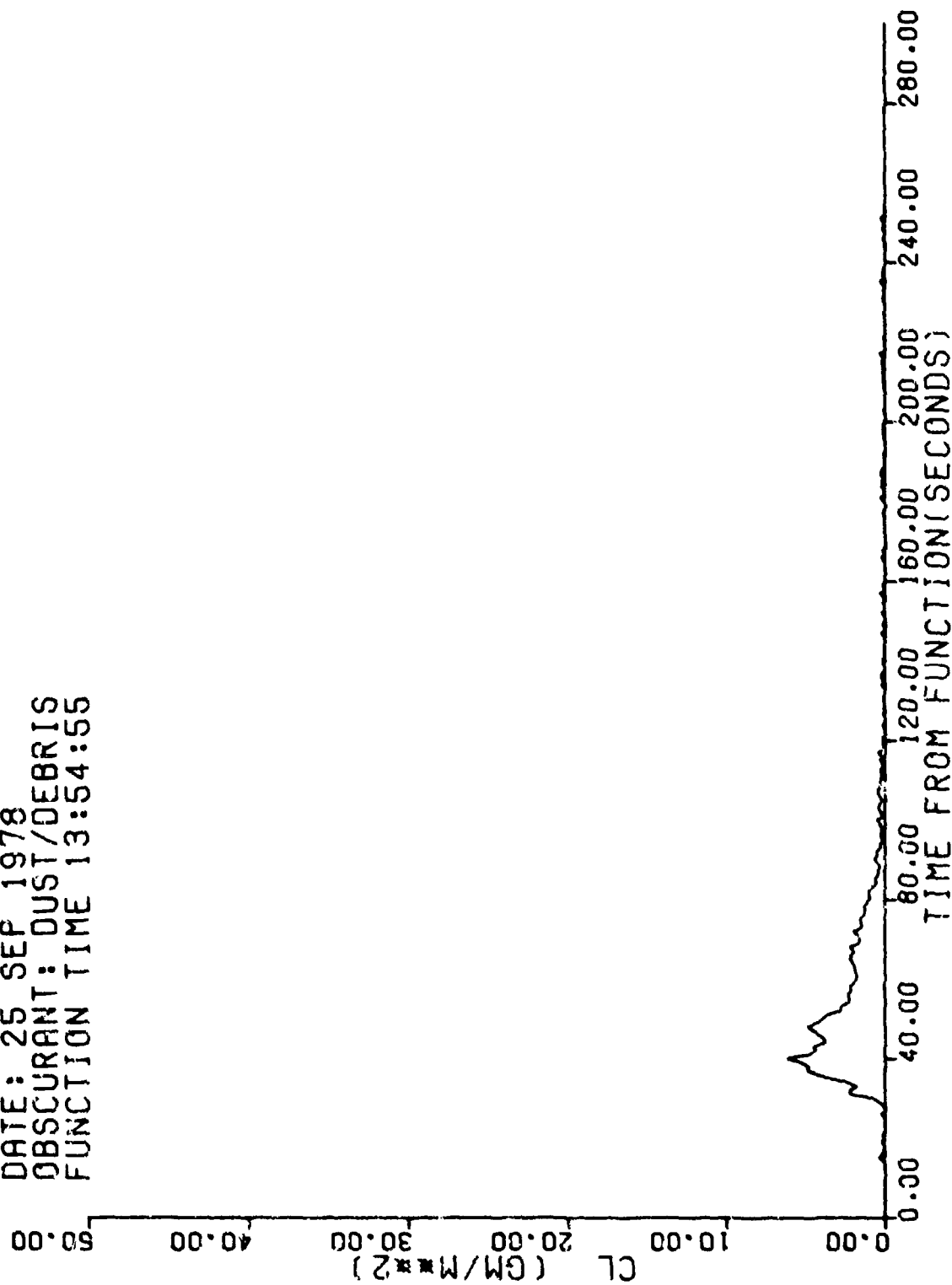
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E1, DPG DUST ADDON  
 DATE: 25 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:54:55

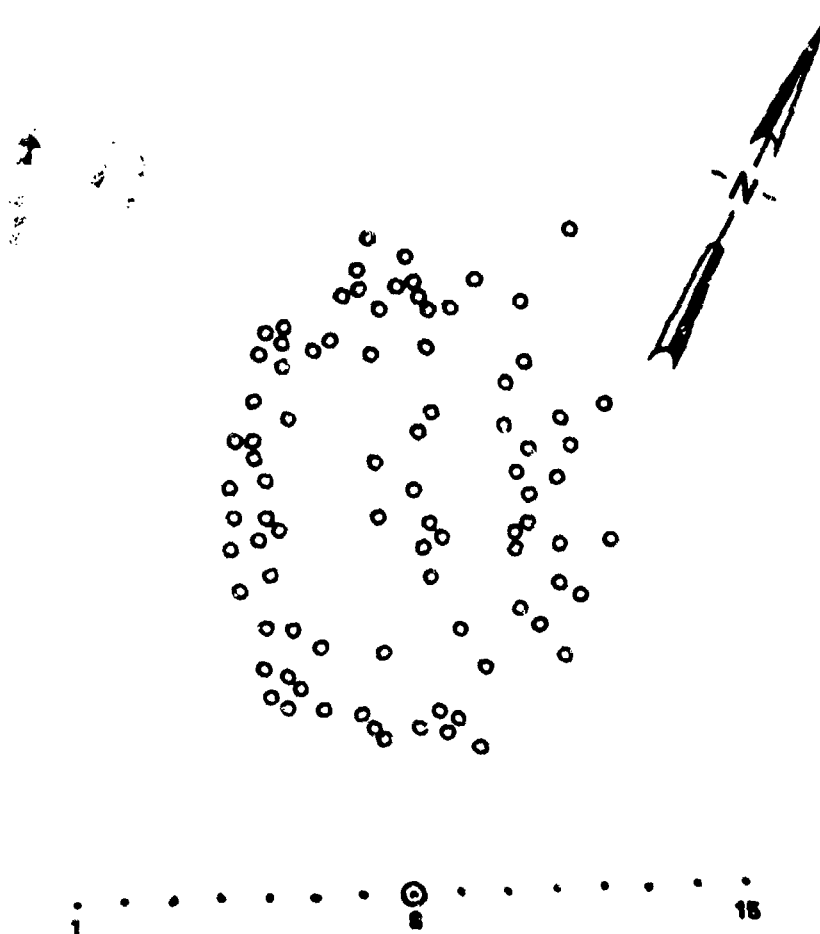


CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #E1 (OP1-005)  
DATE: 25 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:54:55



CL VALUES VERSUS TIME FOR CENTER ROW  
CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT



- DUST SAMPLER POSITIONS
- ⊙ PARTICLE SIZE ANALYZER
- M42/M46 SUBMUNITIONS

LOCATION OF SUBMUNITIONS, TRIAL E-1

B-3-12



APPENDIX B, SECTION 4

CONTENTS

\* TRIAL E2, DPG DUST ADD-ON, 27 September 1978

PAGE	
B-4-2	TABLE: TEST DAY DATA
B-4-3	FIGURE: DOSAGE ALONG SAMPLING LINE
B-4-4	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu\text{m}$
B-4-5	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu\text{m}$
B-4-6	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-4-7	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-4-8	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-4-9	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-4-10	FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-4-11	FIGURE: CL VALUES VERSUS TIME
B-4-12	FIGURE: MUNITION LOCATION

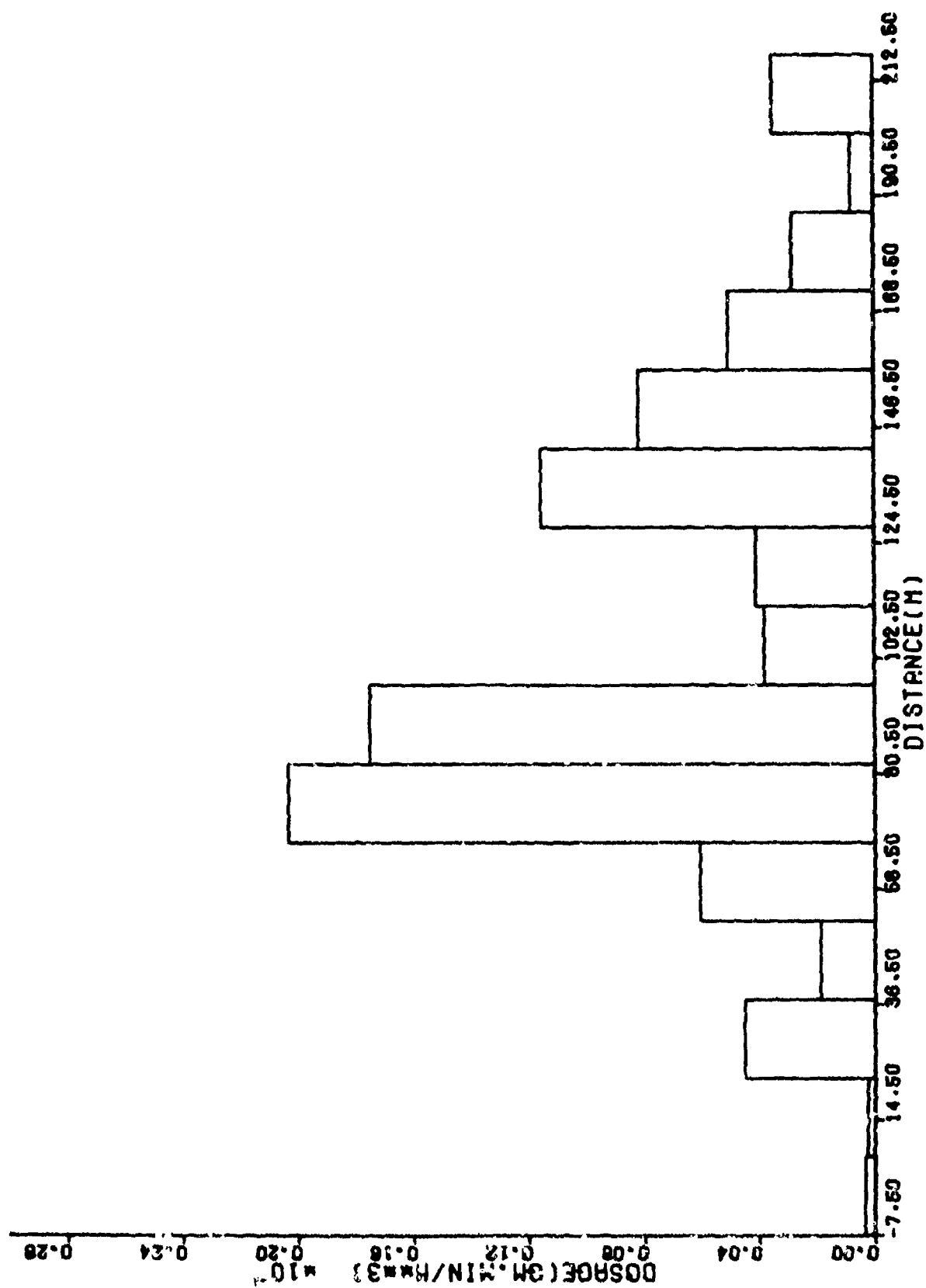
IDENTIFICATION:

Trial Number: E2 (DP1-005)  
Date of Trial: 27 Sept 78  
Function Time: 13:01:20

<u>Particle Size Range (<math>\mu</math>m)</u>	<u>Proportion %</u>
0.65 - 1.3	55
1.3 - 2.3	21
2.3 - 10.0	24
10.0 - 15.0	0
15.0 - 20.0	0
> - 20.0	0

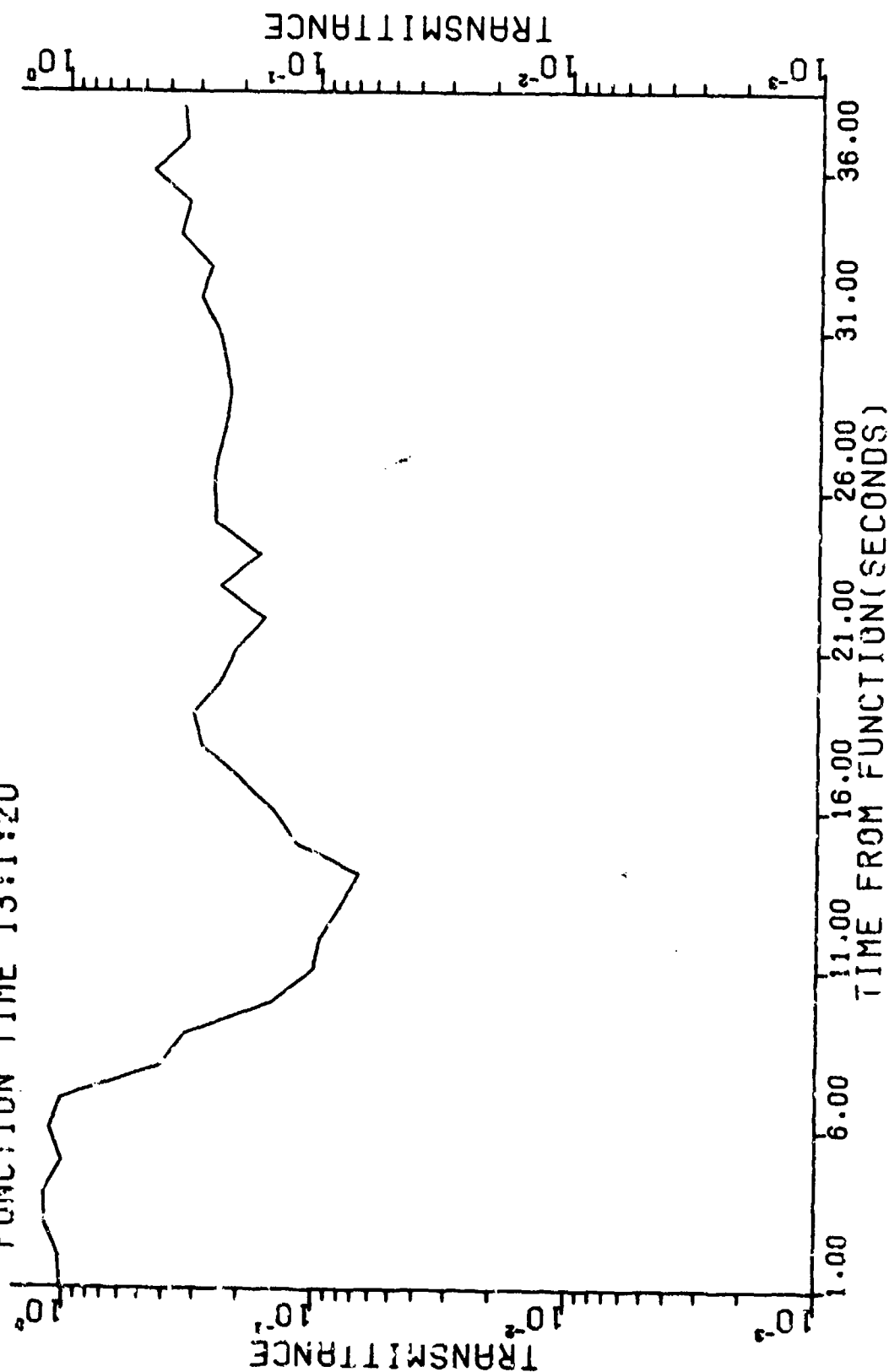
NMD ( $\mu$ m)\* 1.2

\*Data was reduced manually. NMD is based on graphical estimate.



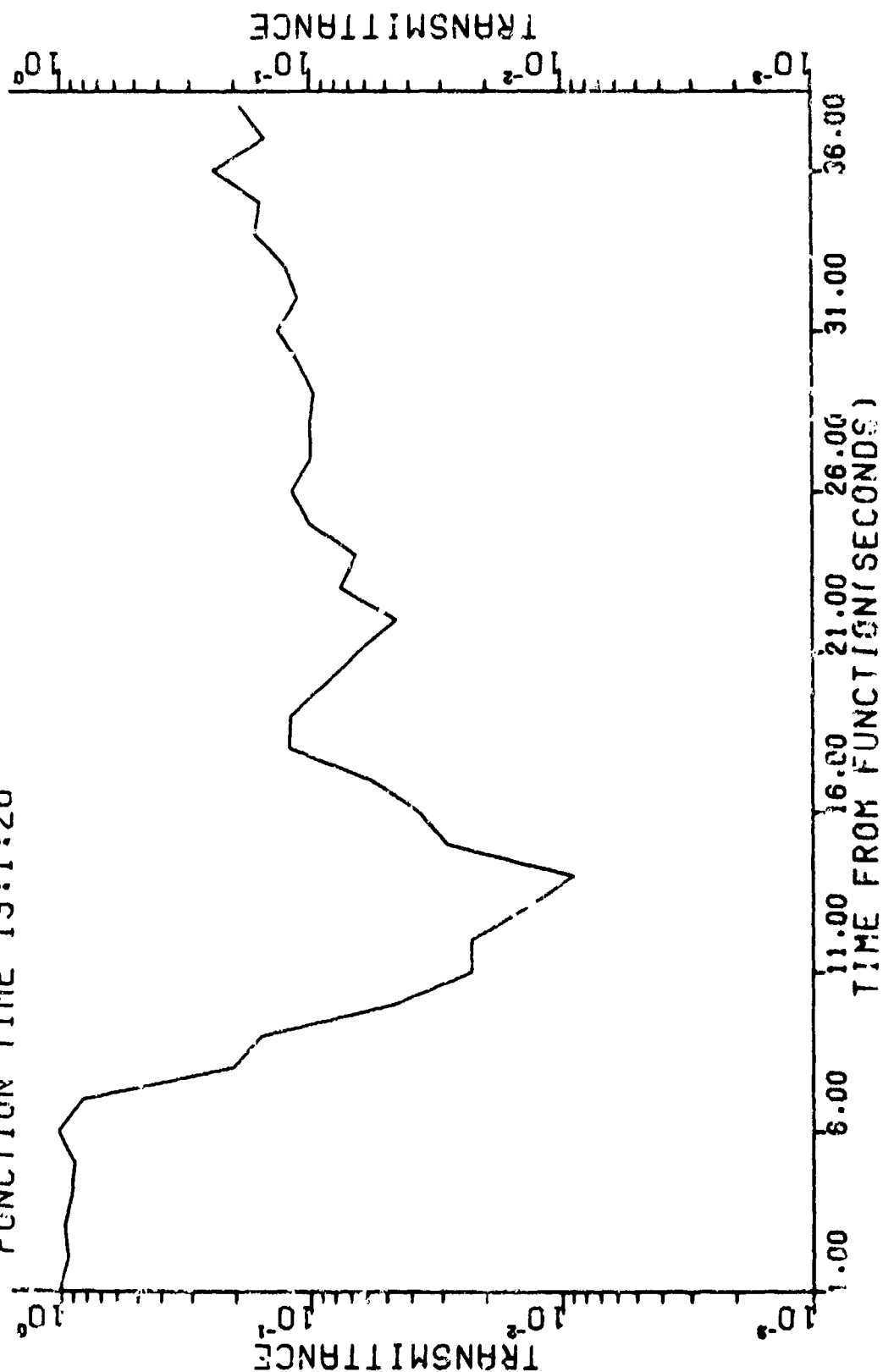
TRIAL E2, OPC DUST ADD-ON, 27 SEP 1978, 13:01:20, DUST

TRIAL #E2 (CP1-005)  
DATE: 27 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:1:20



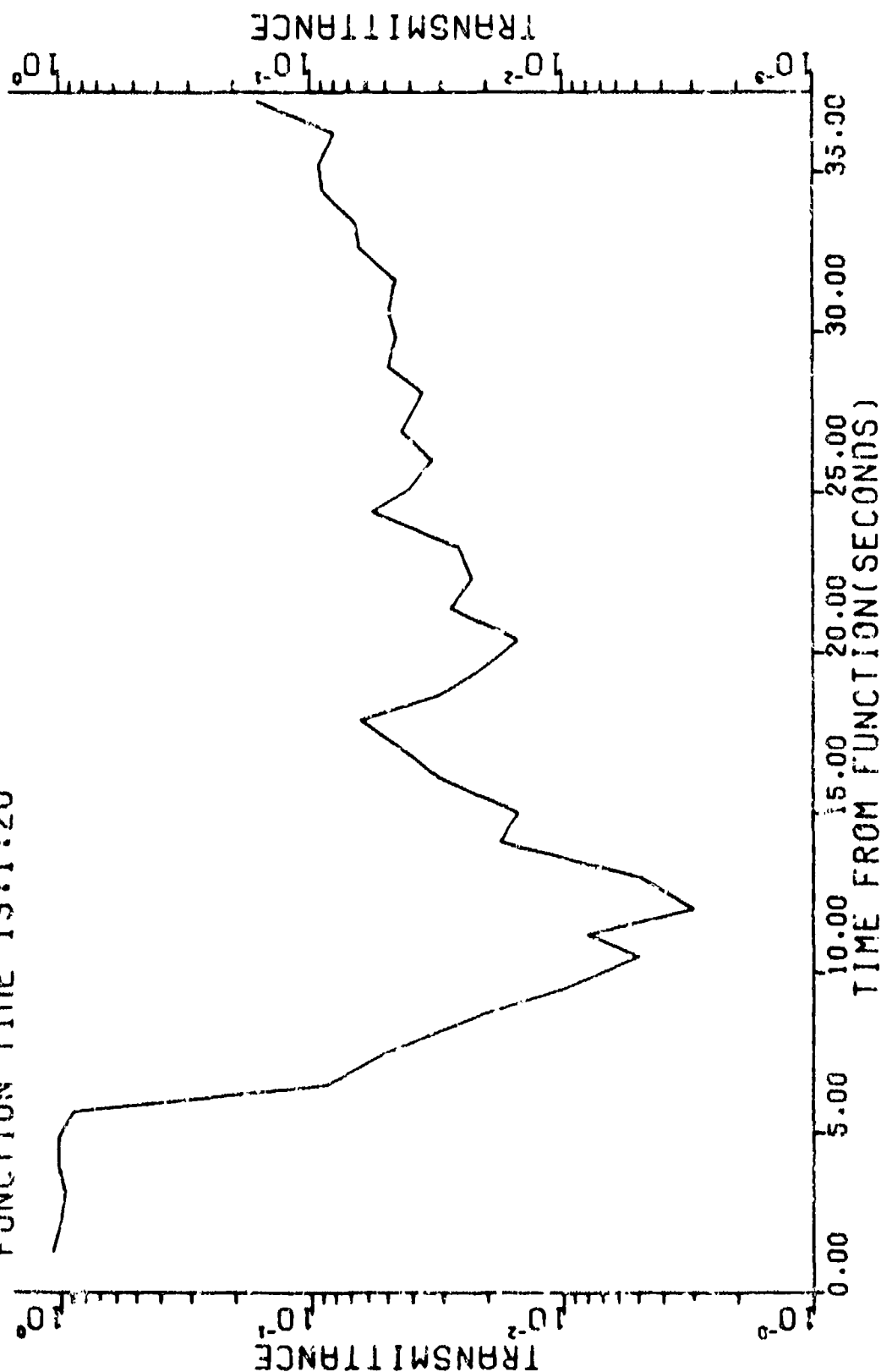
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED C CENTER ROW

TRIAL #E2 (DP1-005)  
DATE: 27 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:1:20



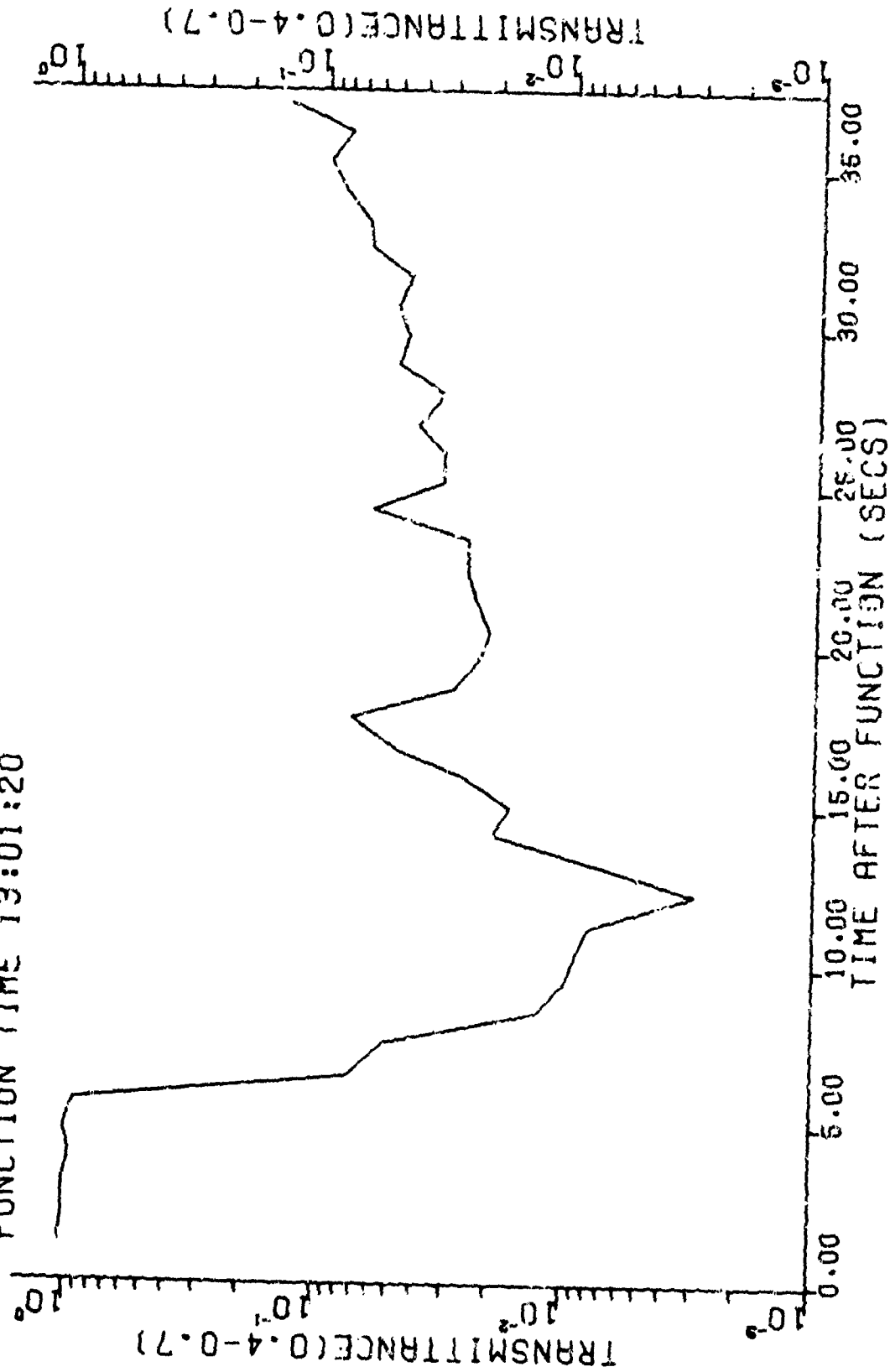
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED ON CENTER ROW

TRIAL #E2 (DP1-005)  
DATE: 27 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:1:20



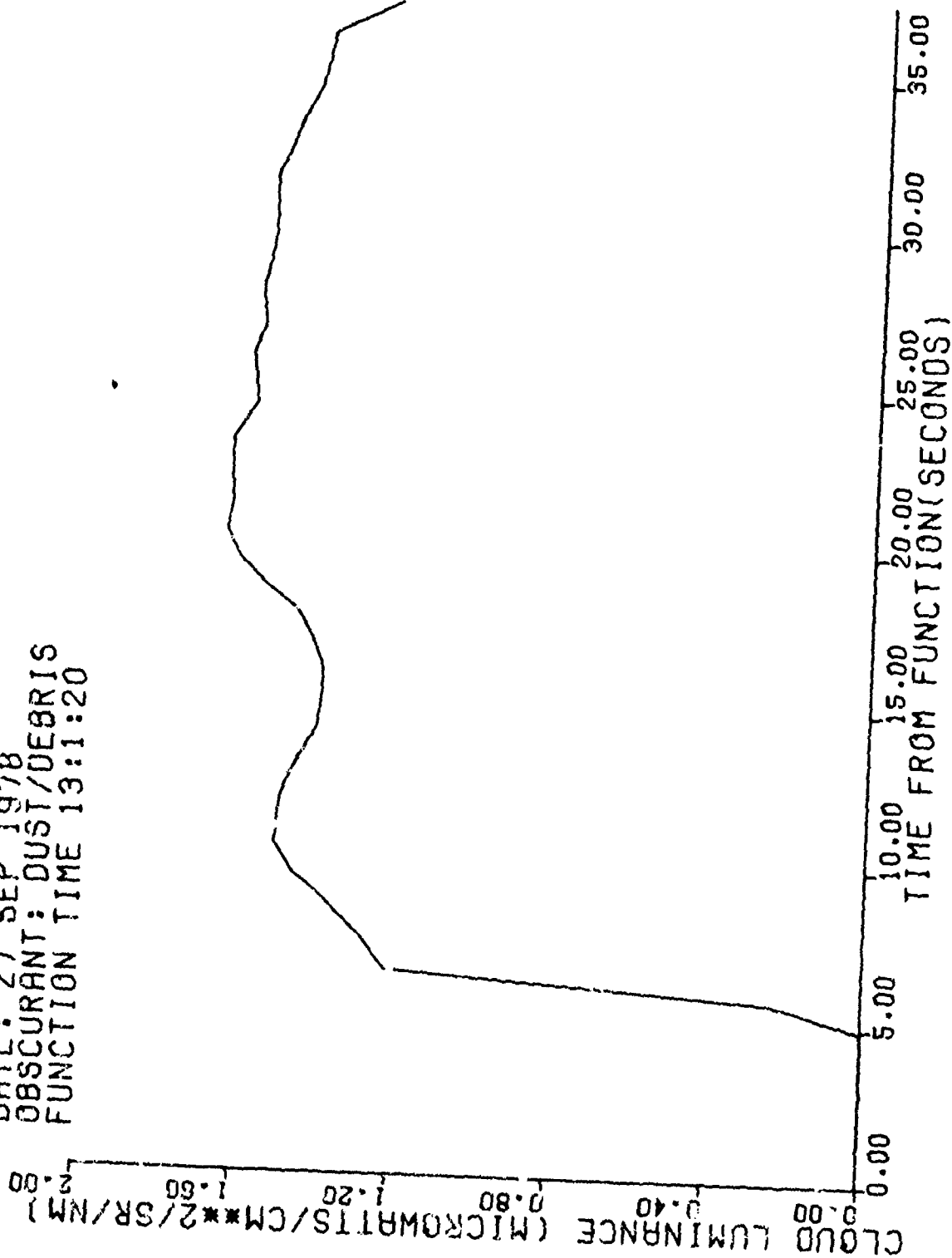
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060  $\mu$ m LOCATED ON CENTER ROW

TRIAL E2: DPG DUST ADDON  
 DATE: 27 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:01:20



TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

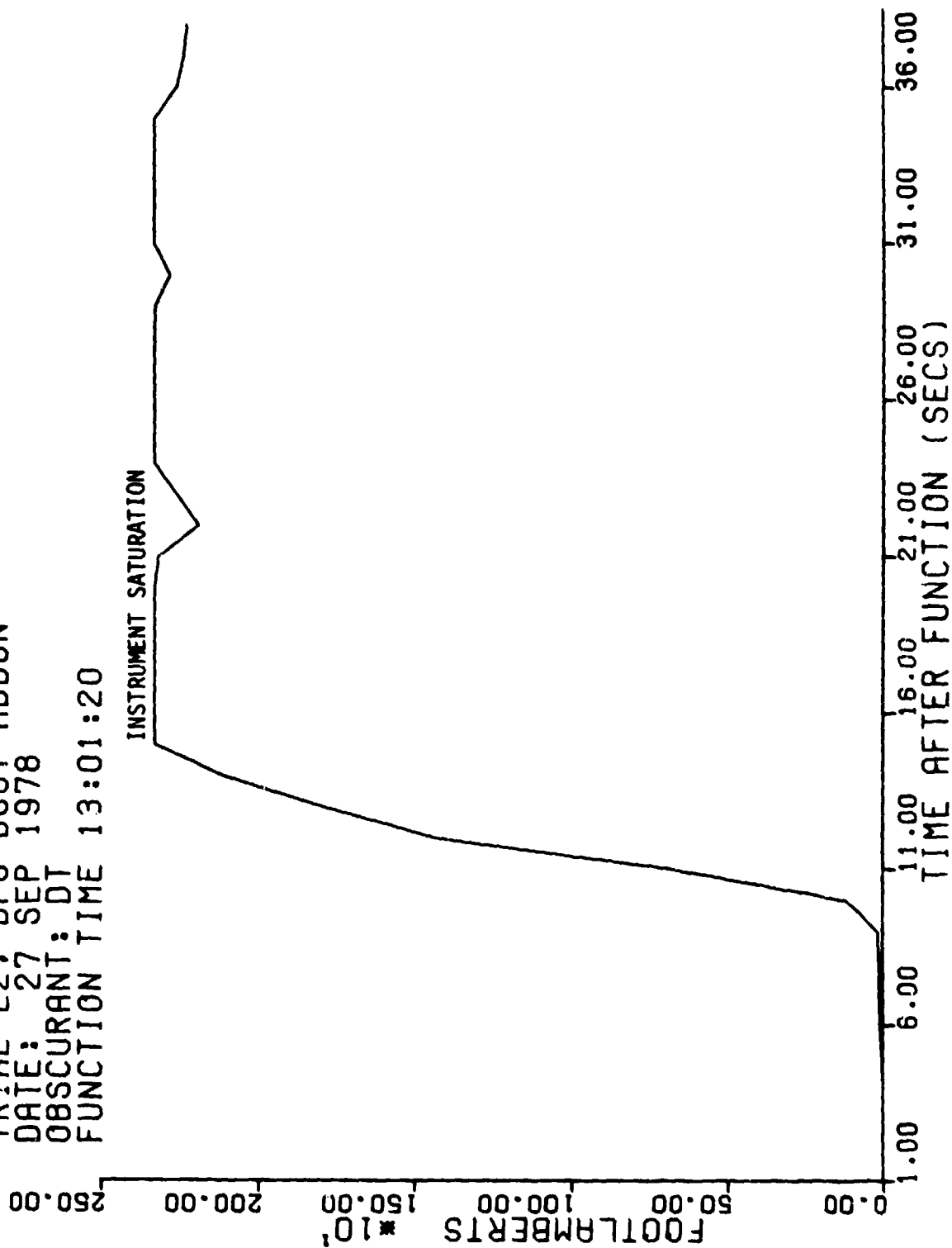
TRIAL #E2 (DP1-005)  
 DATE: 27 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 13:1:20



CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

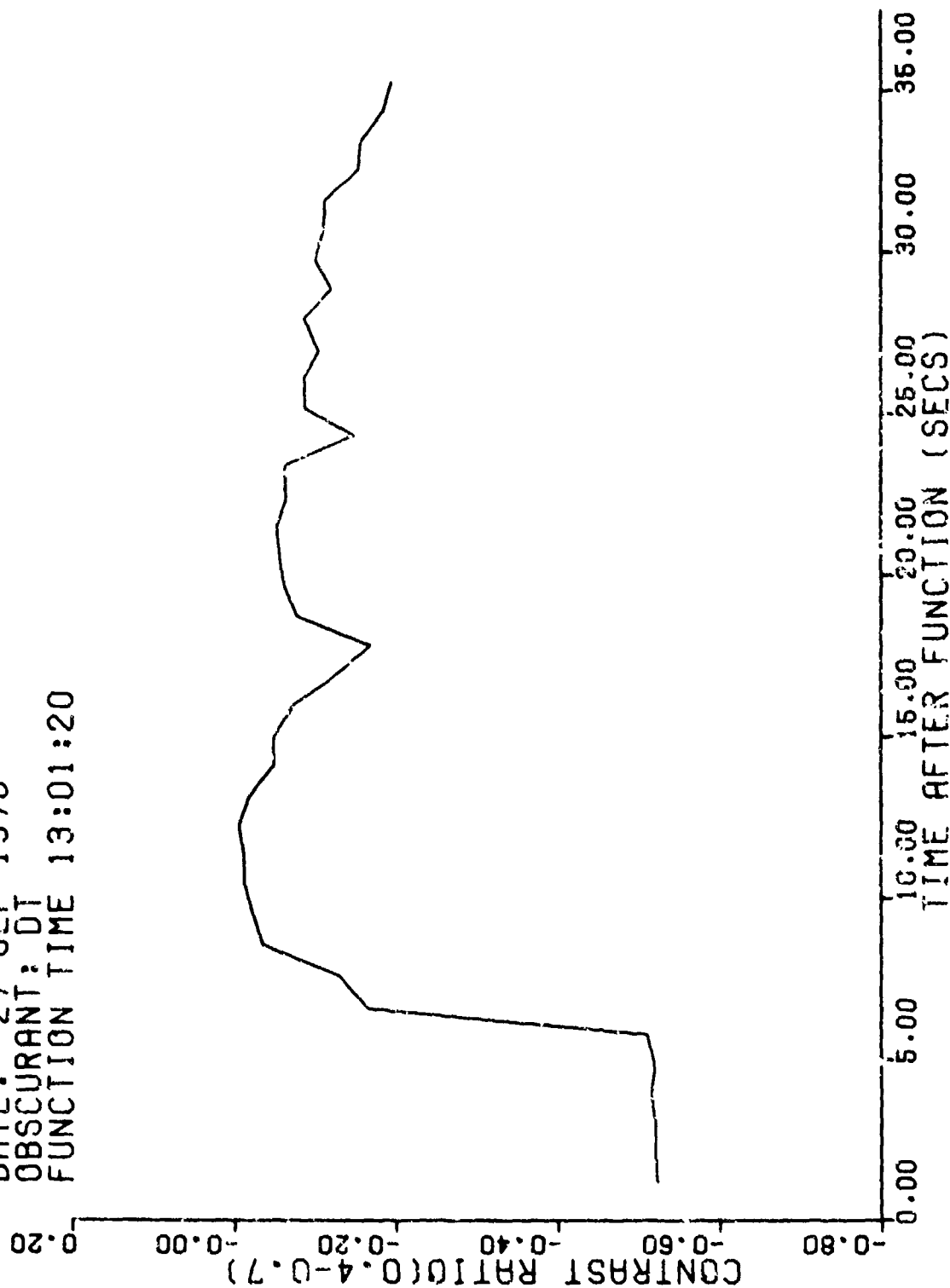


TRIAL E2; DPG DUST ADDON  
 DATE: 27 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:01:20



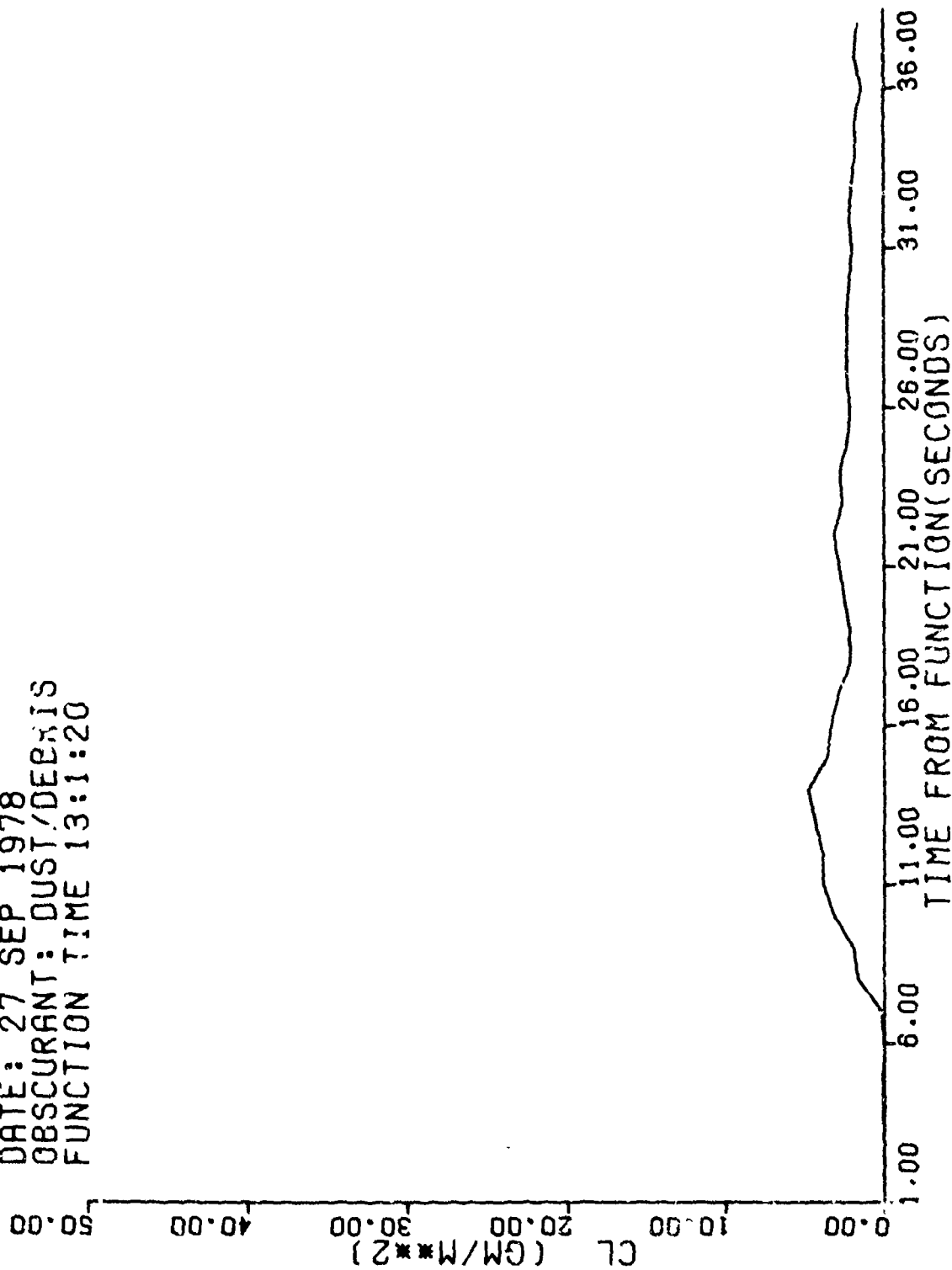
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E2, DPG DUST ADDON  
DATE: 27 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:01:20

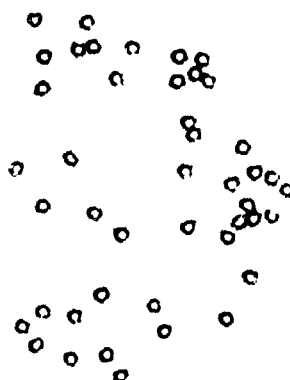


CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #E2 (DP1-005)  
 DATE: 27 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 13:1:20



CL VALUES VERSUS TIME FOR CENTER ROW  
 CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT



Scale: 1mm = 2.36m

- DUST SAMPLER POSITION
- ⊙ PARTICLE SIZE ANALYZER
- M42/M46 SUBMUNITIONS

LOCATION OF SUBMUNITIONS, TRIAL E-2

B-4-12

APPENDIX B, SECTION 5

CONTENTS

TRIAL E3, DPG DUST ADD-ON, 29 September 1978

PAGE

No Data TABLE: TEST DAY DATA

B-5-2 FIGURE: DOSAGE ALONG SAMPLING LINE

B-5-3 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
9.75  $\mu\text{m}$

B-5-4 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
3.443  $\mu\text{m}$

B-5-5 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
1.06  $\mu\text{m}$

B-5-6 FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH  
0.4-0.7  $\mu\text{m}$

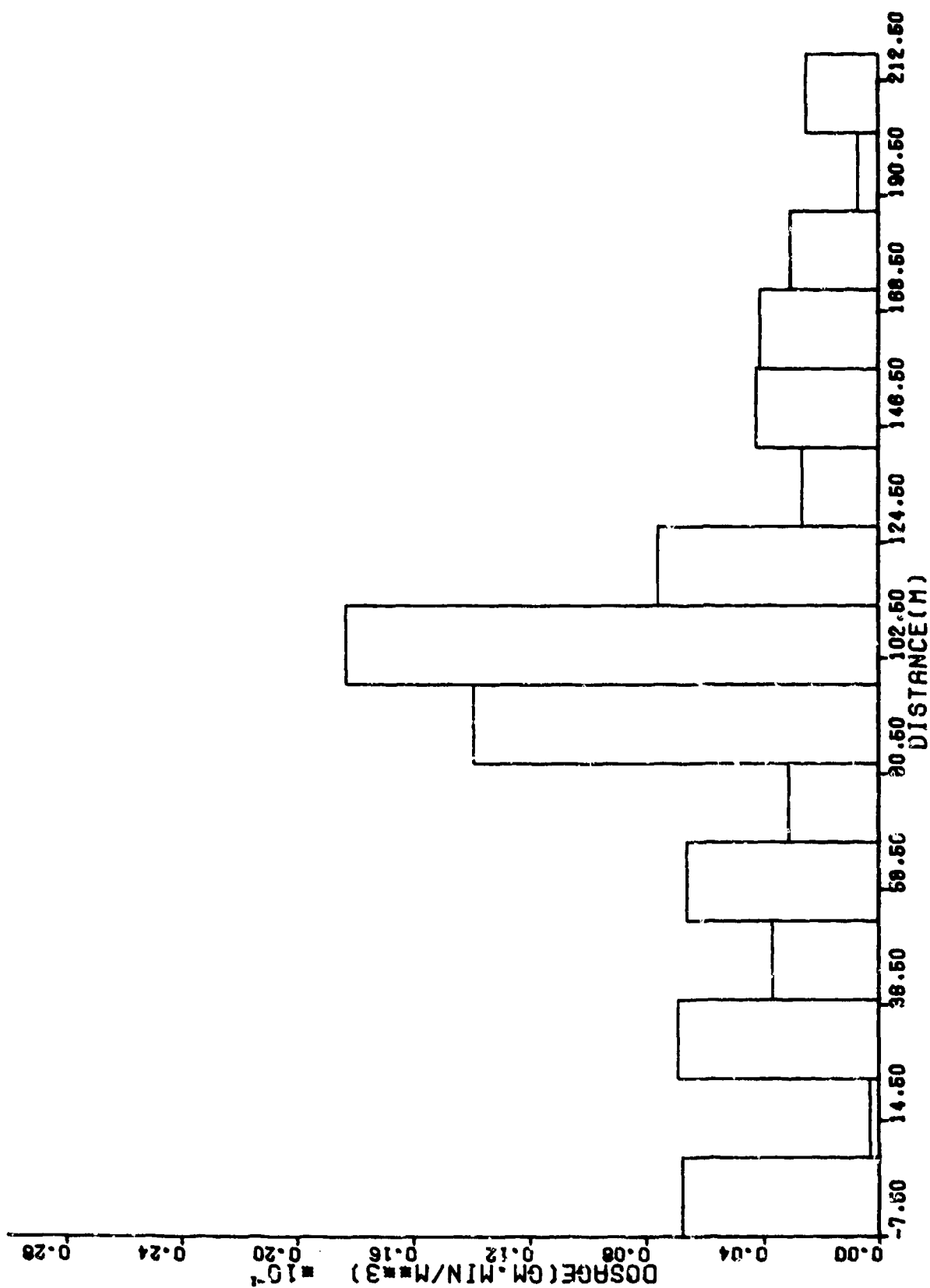
B-5-7 FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH  
1.06  $\mu\text{m}$

B-5-8 FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH  
0.4-0.7  $\mu\text{m}$

B-5-9 FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH  
0.4-0.7  $\mu\text{m}$

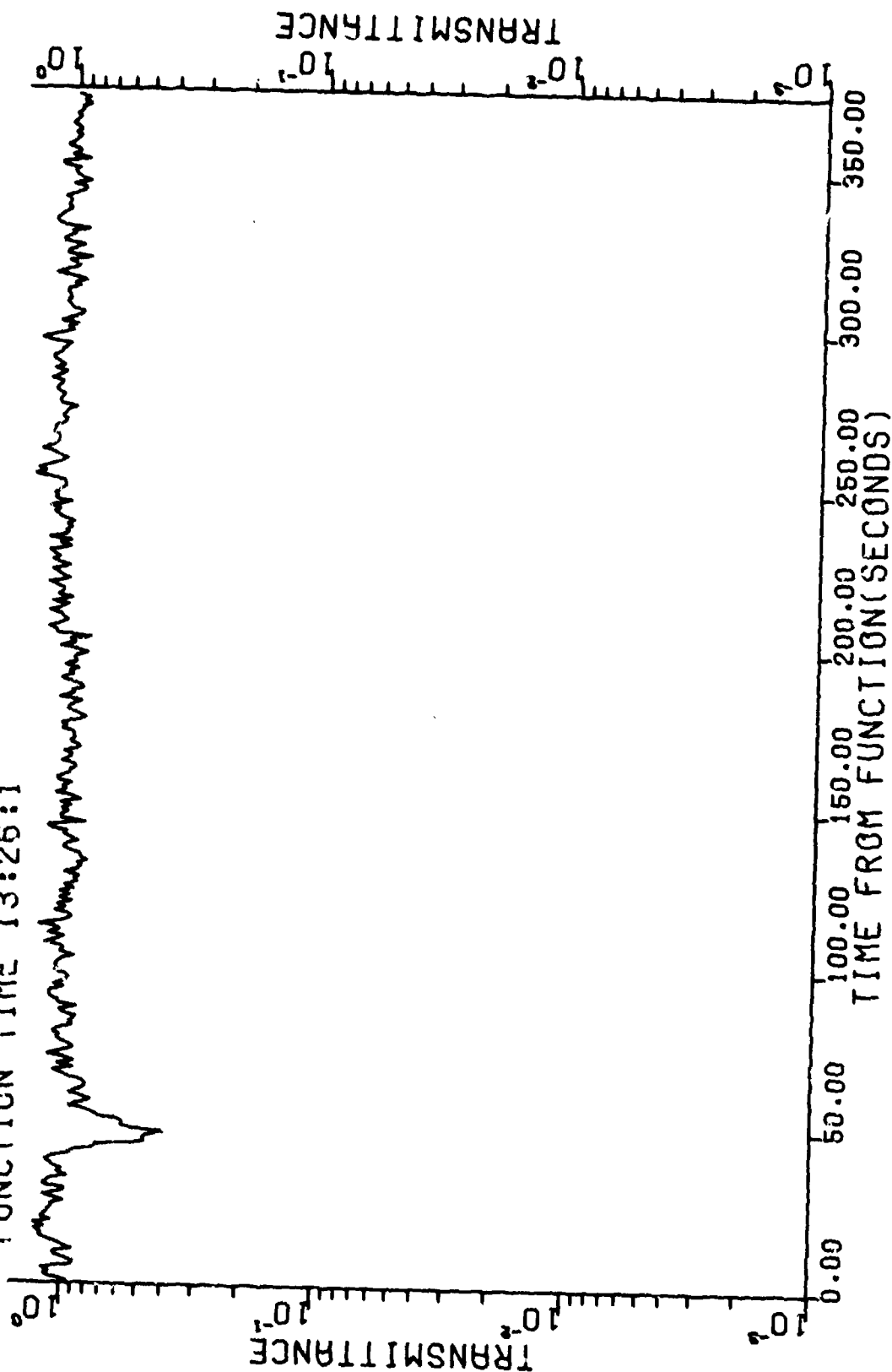
B-5-10 FIGURE: CL VALUES VERSUS TIME

B-5-11 FIGURE: MUNITION LOCATION



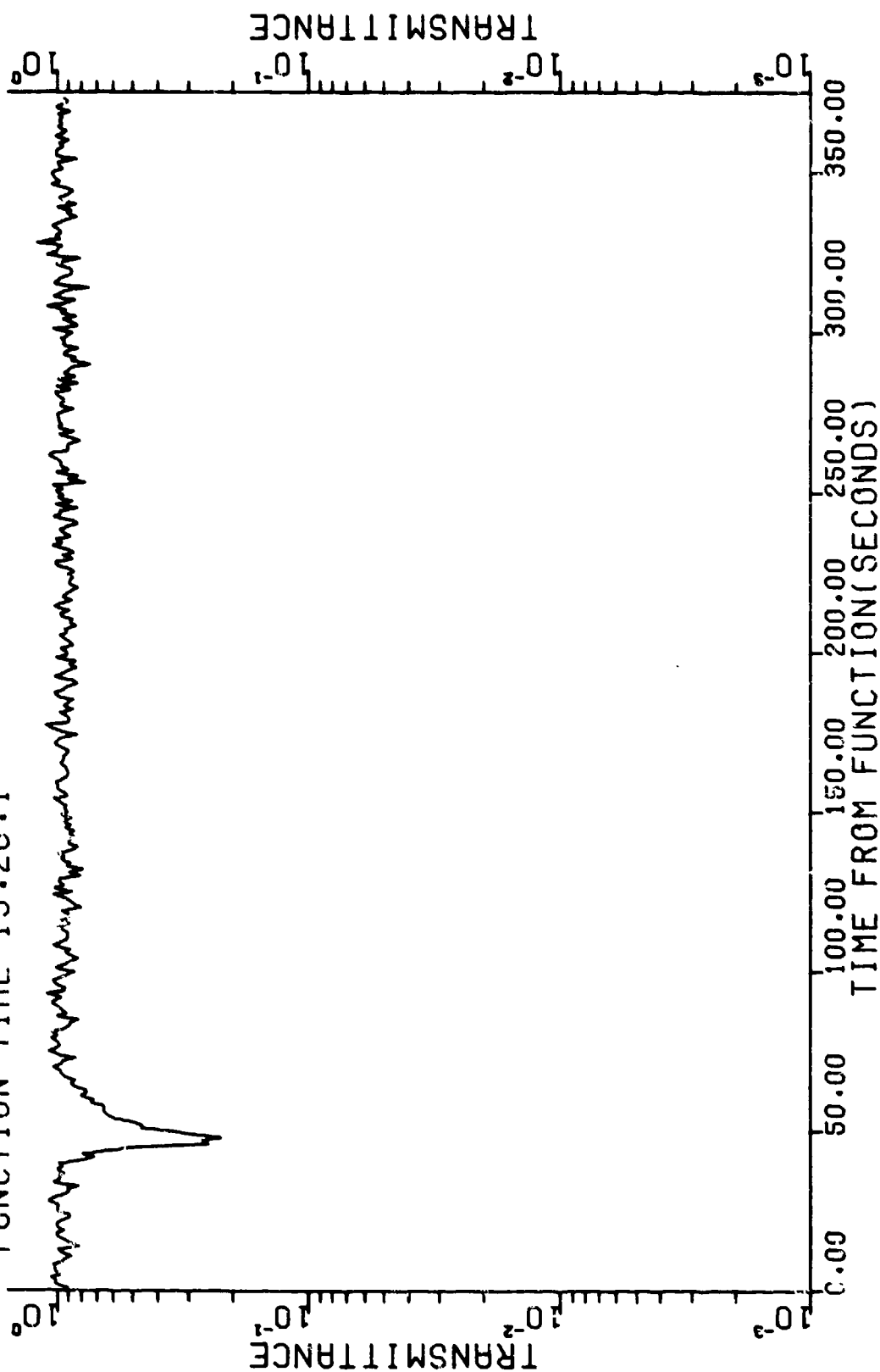
TRIAL E3. DPG DUST ADD-ON, 29 SEP 1978. 13:26:01. DUST

TRIAL #E3 (DP1-005)  
DATE: 29 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:26:1



TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED ON CENTER ROW

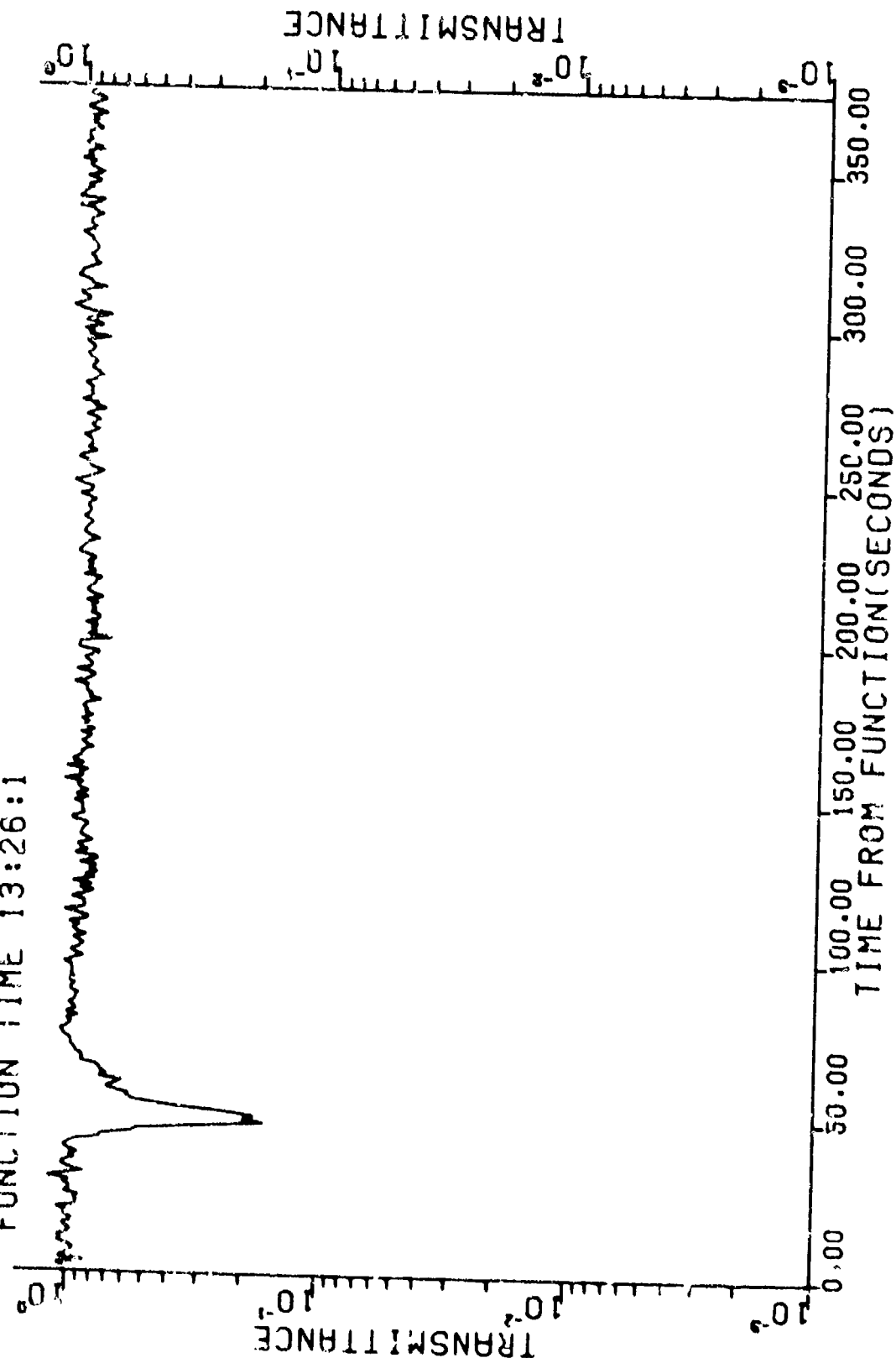
TRIAL #E3 (DP1-005)  
DATE: 29 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 13:26:1



TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ M LOCATED C CENTER ROW

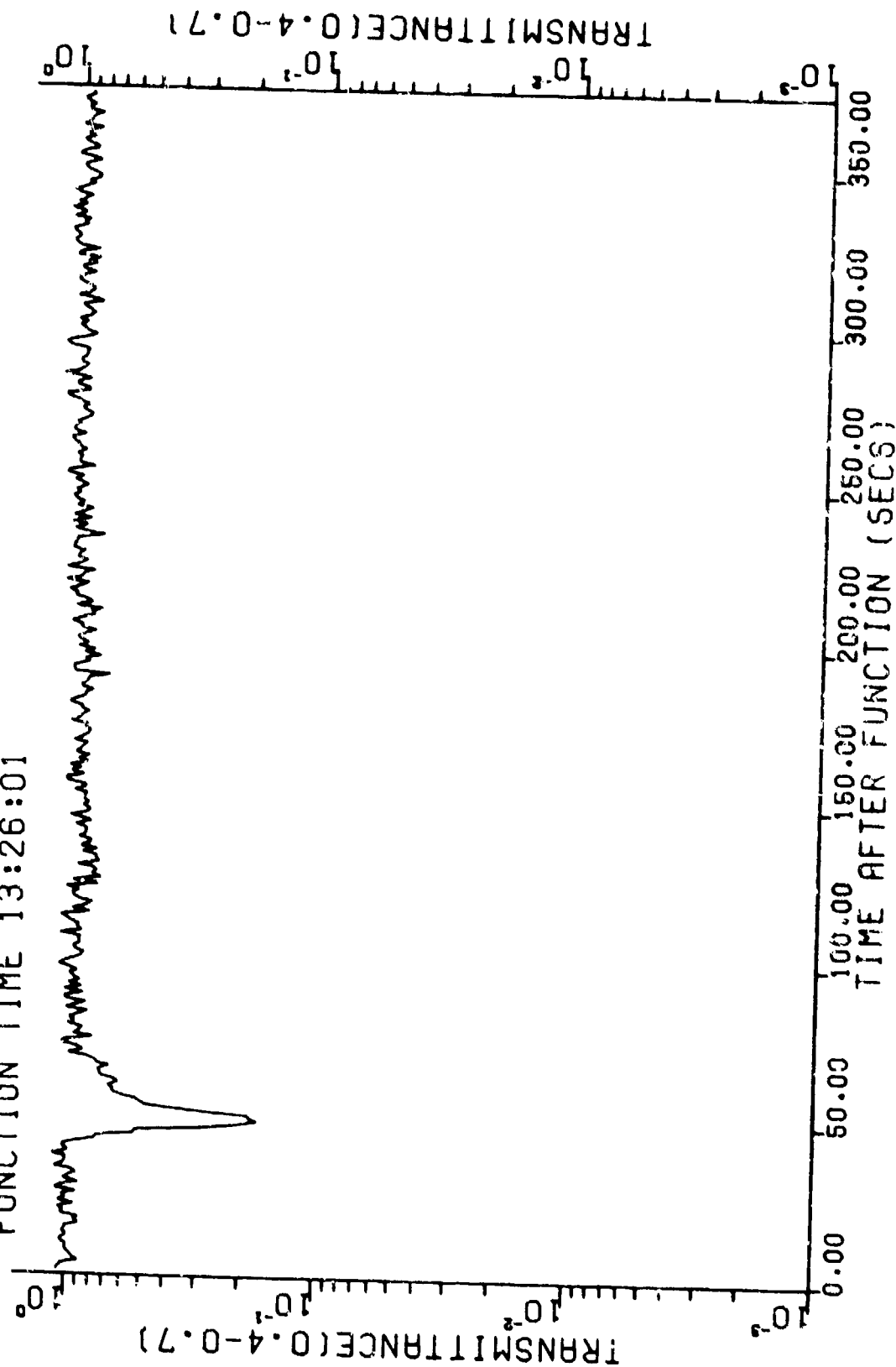


TRIAL #E3 (DP1-005)  
DATE: 29 SEP 1978  
OBSURANT: DUST/DEBRIS  
FUNCTION TIME 13:26:1



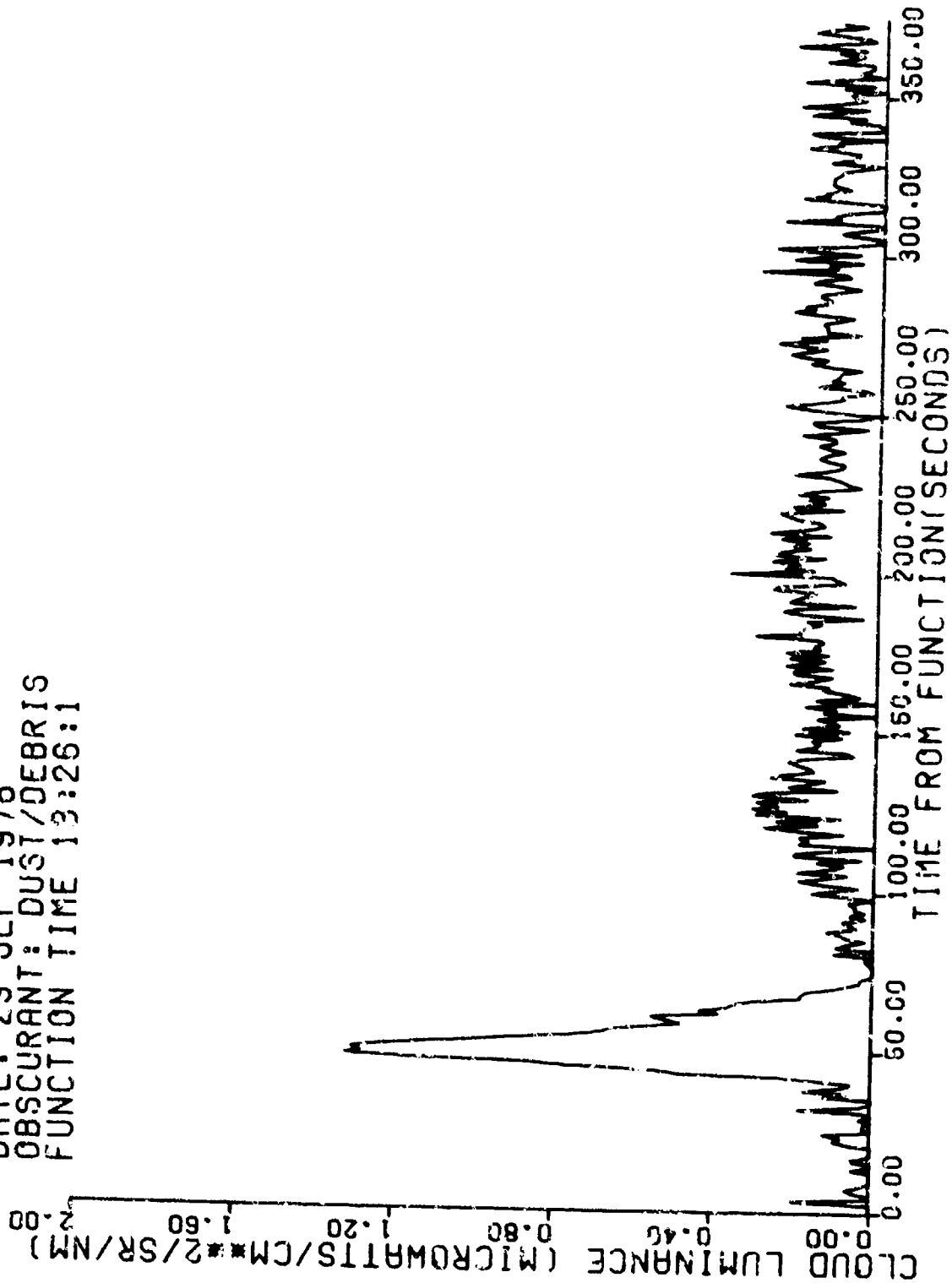
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

TRIAL E3, DPG DUST ADDON  
 DATE: 29 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:26:01



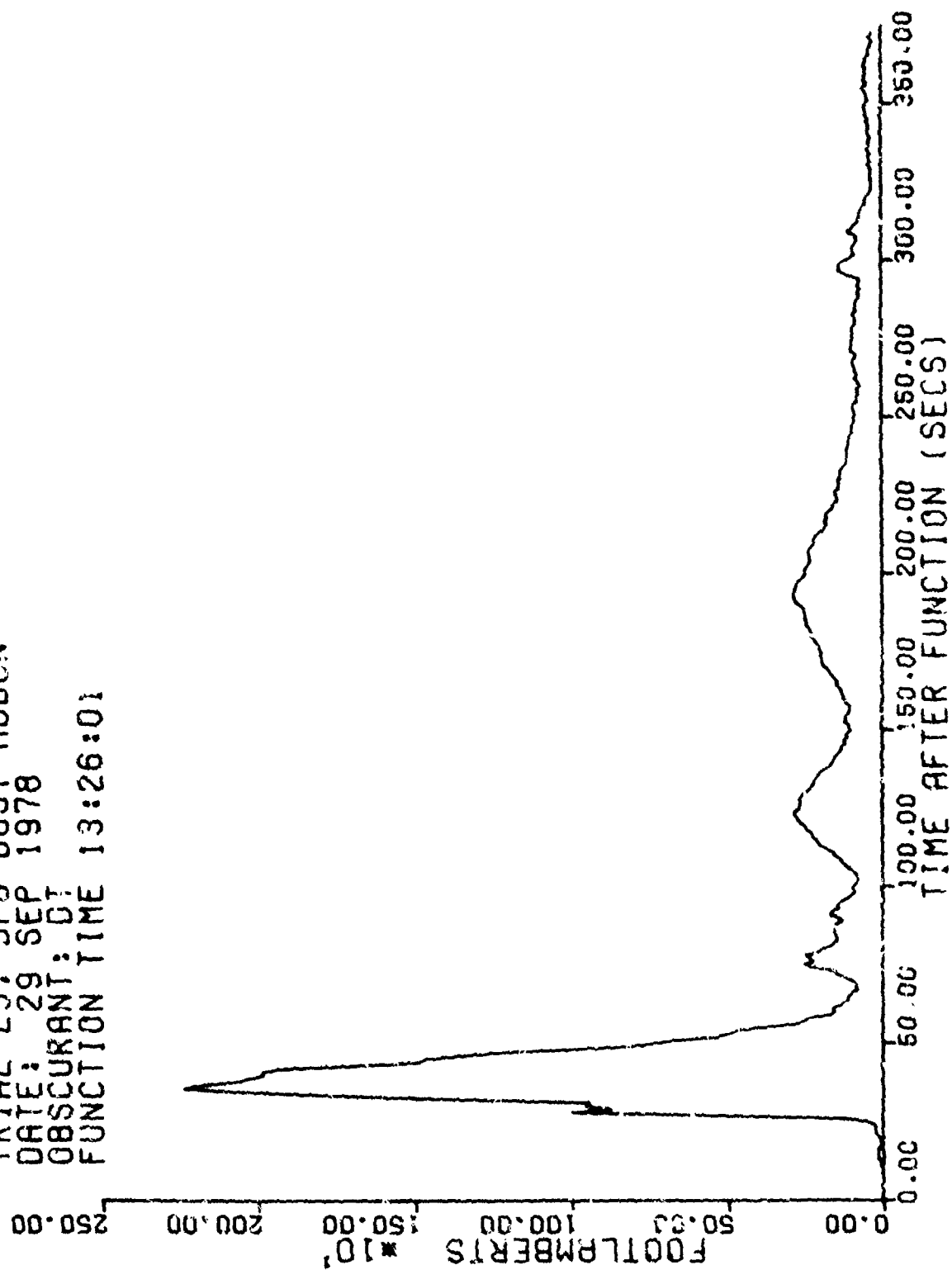
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEF JRED ALONG CENTER ROW

TRIAL #E3 (DP1-005)  
 DATE: 29 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 13:26:1



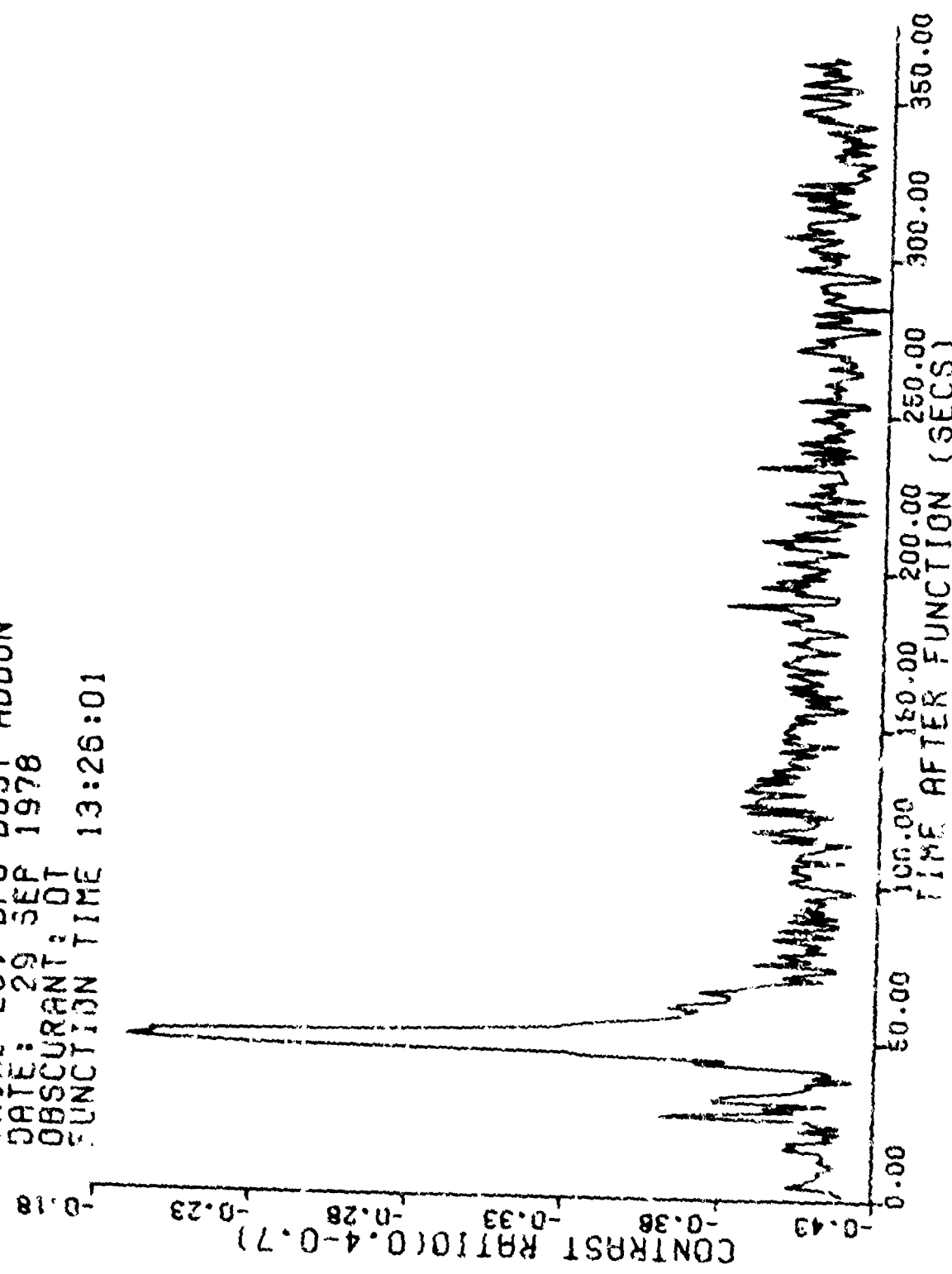
CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

TRIAL E3: SPG DUST ADDON  
 DATE: 29 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:26:01



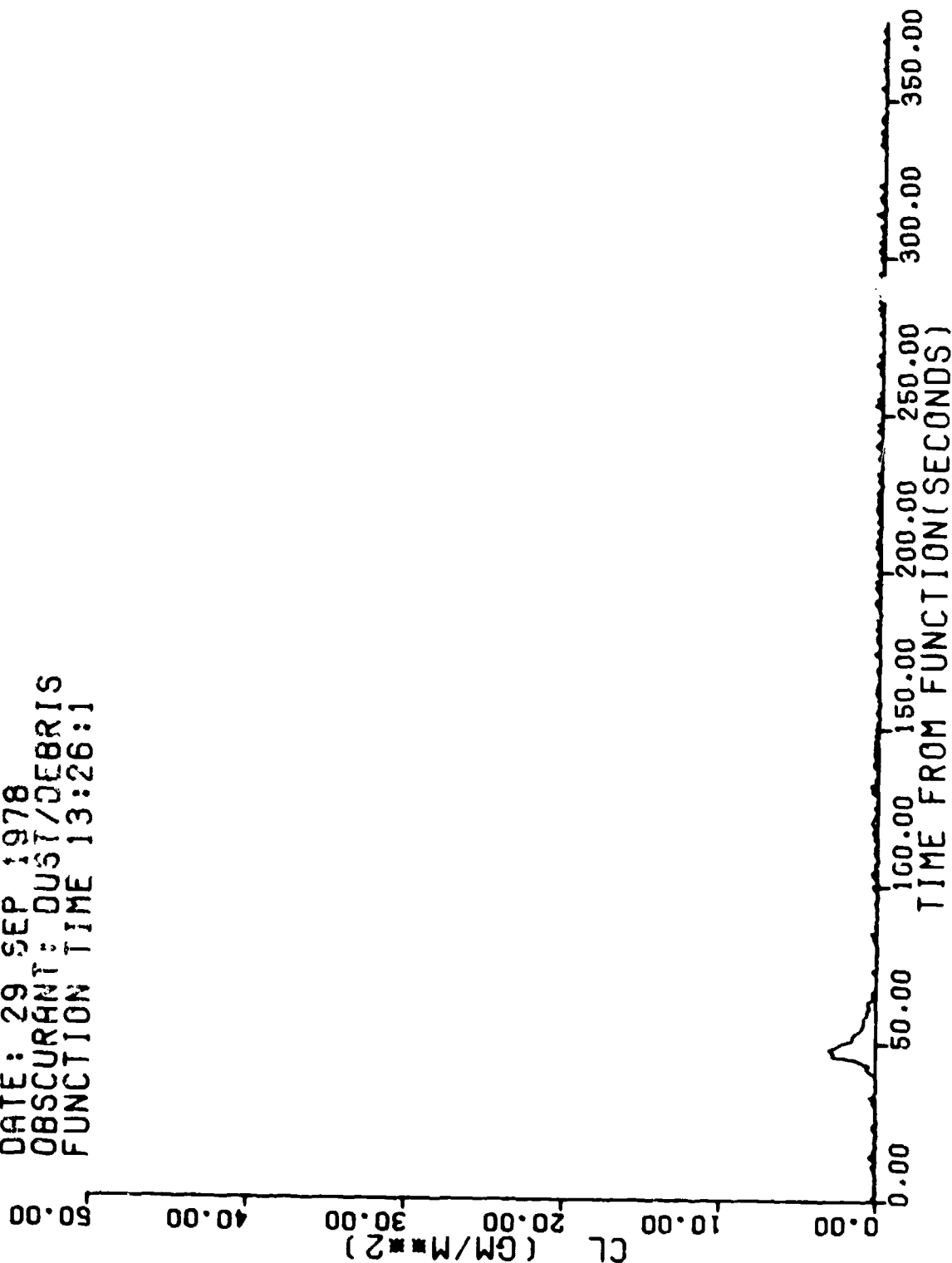
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3: DPG DUST ADDON  
 DATE: 29 SEP 1978  
 OBSCURANT: OT  
 FUNCTION TIME 13:26:01

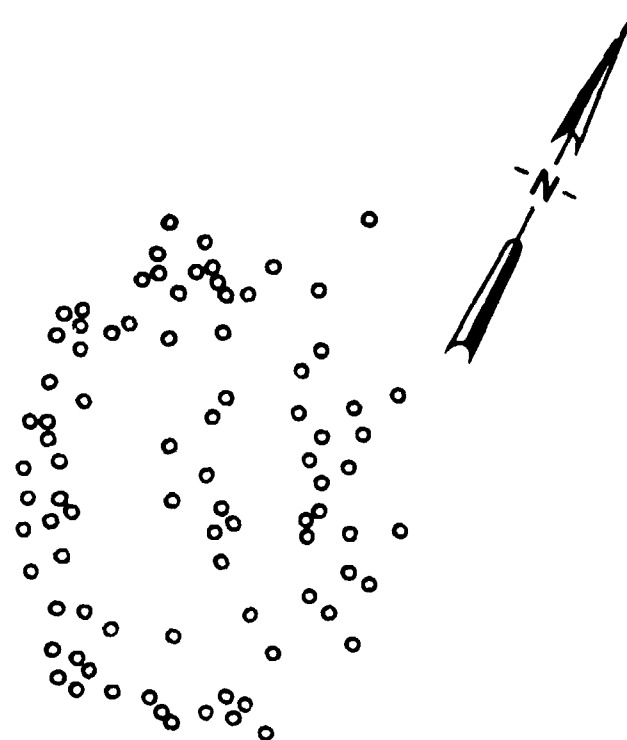


CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #E3 (DP1-005)  
 DATE: 29 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 13:26:1



CL VALUES VERSUS TIME FOR CENTER ROW  
 CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT



1 . . . . . 8 . . . . . 15

Scale: 1mm = 2.38m

- DUST SAMPLER POSITIONS
- ⊙ PARTICLE SIZE ANALYZER
- M42/M48 SUBMUNITIONS

LOCATION OF SUBMUNITIONS, TRIAL E-3

APPENDIX B, SECTION 6

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TRIAL D1, DPG DUST ADD-ON, 14 September 1978

PAGE	
B-6-2	TABLE: TEST DAY DATA
B-6-3	FIGURE: DOSAGE ALONG SAMPLING LINE
B-6-4	FIGURE: AVERAGE NMD VERSUS TIME
B-6-5	FIGURE: PARTICLE SIZE DISTRIBUTION
B-6-6	FIGURE: PROPORTION OF PARTICLES VERSUS TIME
B-6-7	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu\text{m}$
B-6-8	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu\text{m}$
B-6-9	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-6-10	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-6-11	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-6-12	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-6-13	FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-6-14	FIGURE: CL VALUES VERSUS TIME

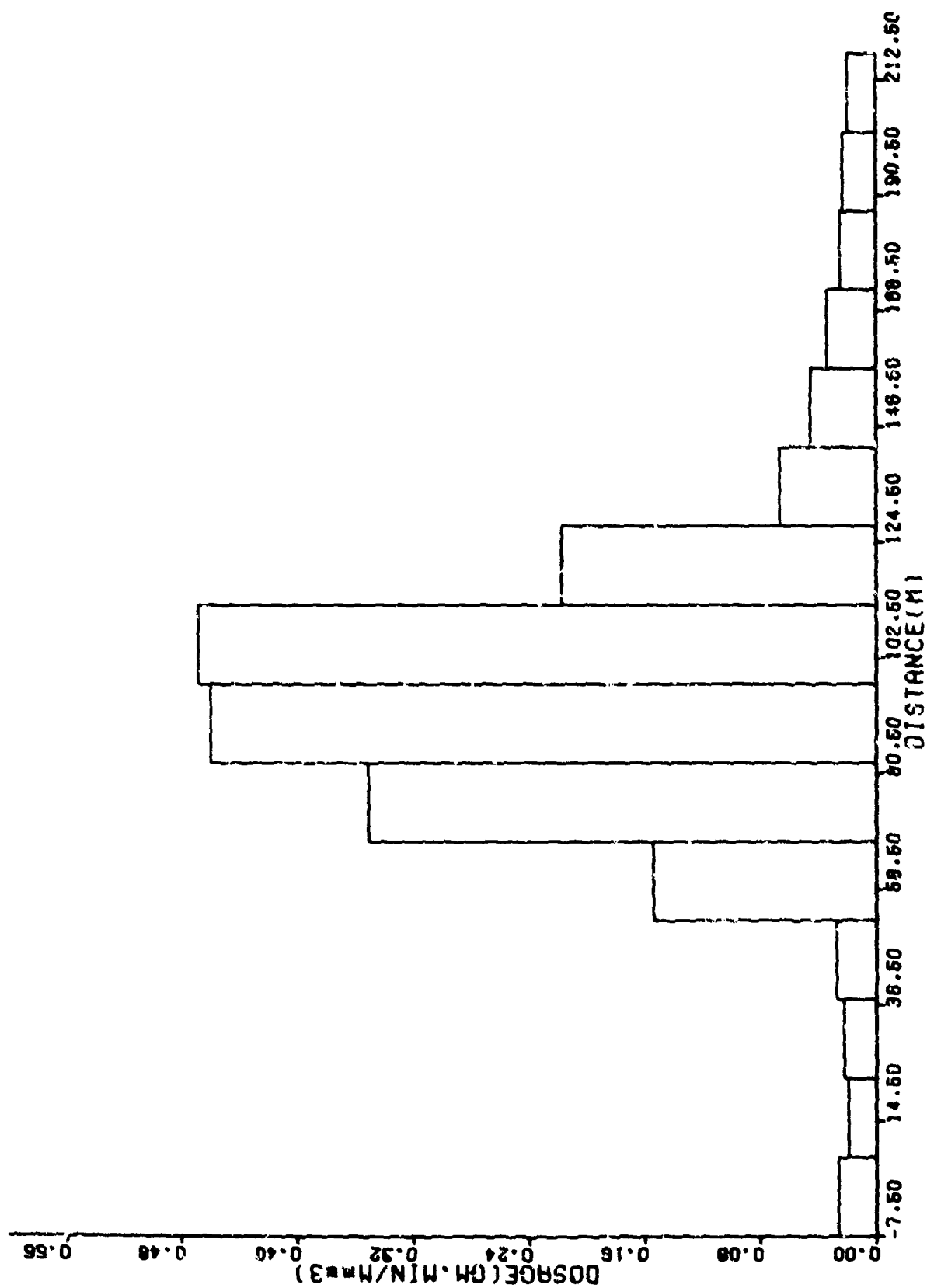


IDENTIFICATION:

Trial Number: D1 (DP1-005)  
Date of Trial 14 Sept 78  
Function Time: 11:02:59

<u>Particle Size Range</u>	<u>Proportion %</u>
0.65 - 1.3	7
1.3 - 2.3	13
2.3 - 10.0	79
10.0 - 15.0	0
15.0 - 20.0	1
> - 20.0	0

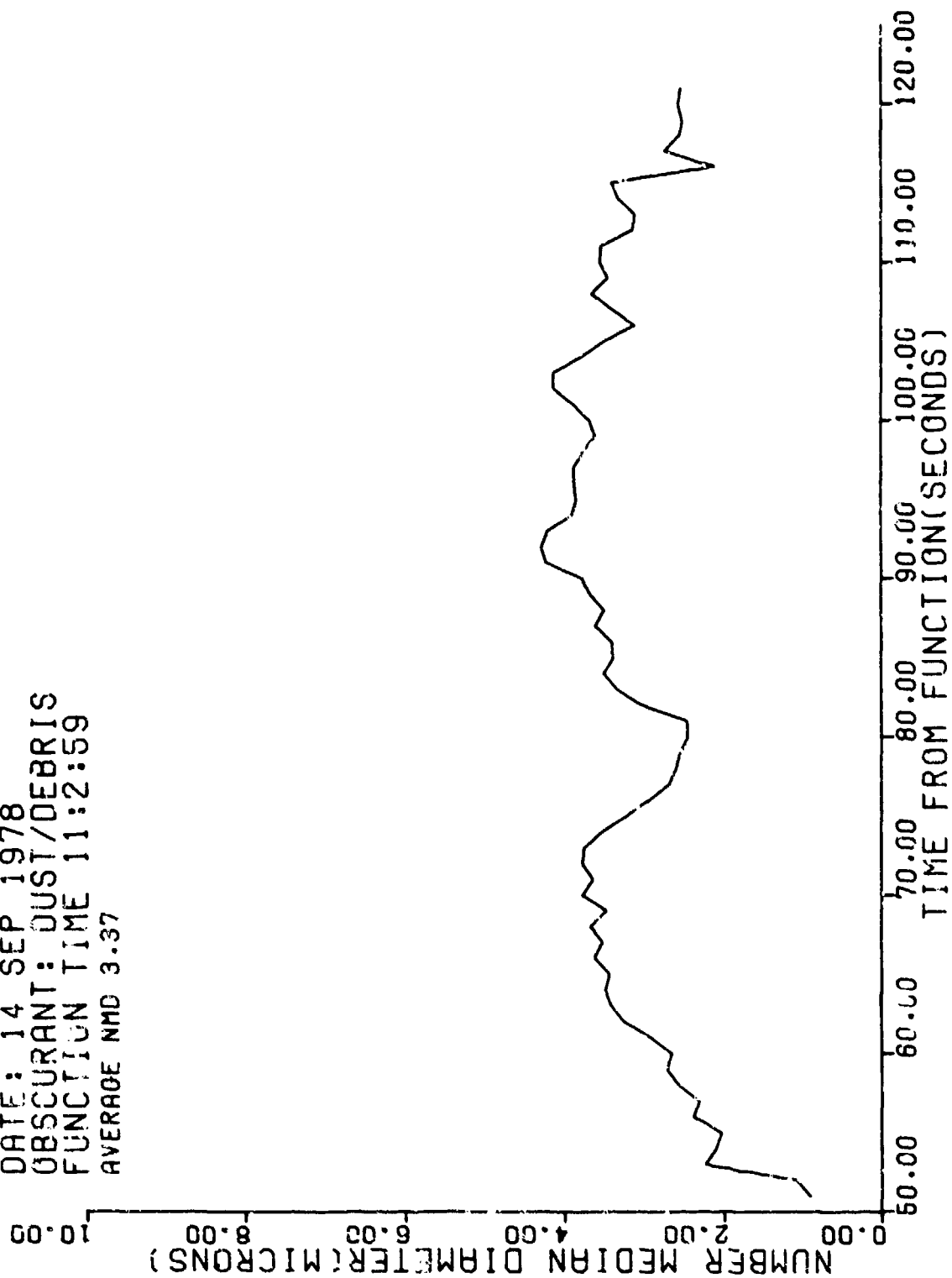
Log NMD 0.528  
 $\sigma_{10}$   
Log NMD 0.245  
 $\sigma_{10}$   
NMD ( $\mu m$ ) 3.37



TRIAL 01, DPG DUST ADD-ON, 14 SEP 1978, 11:02:59, DUST

PSA #2

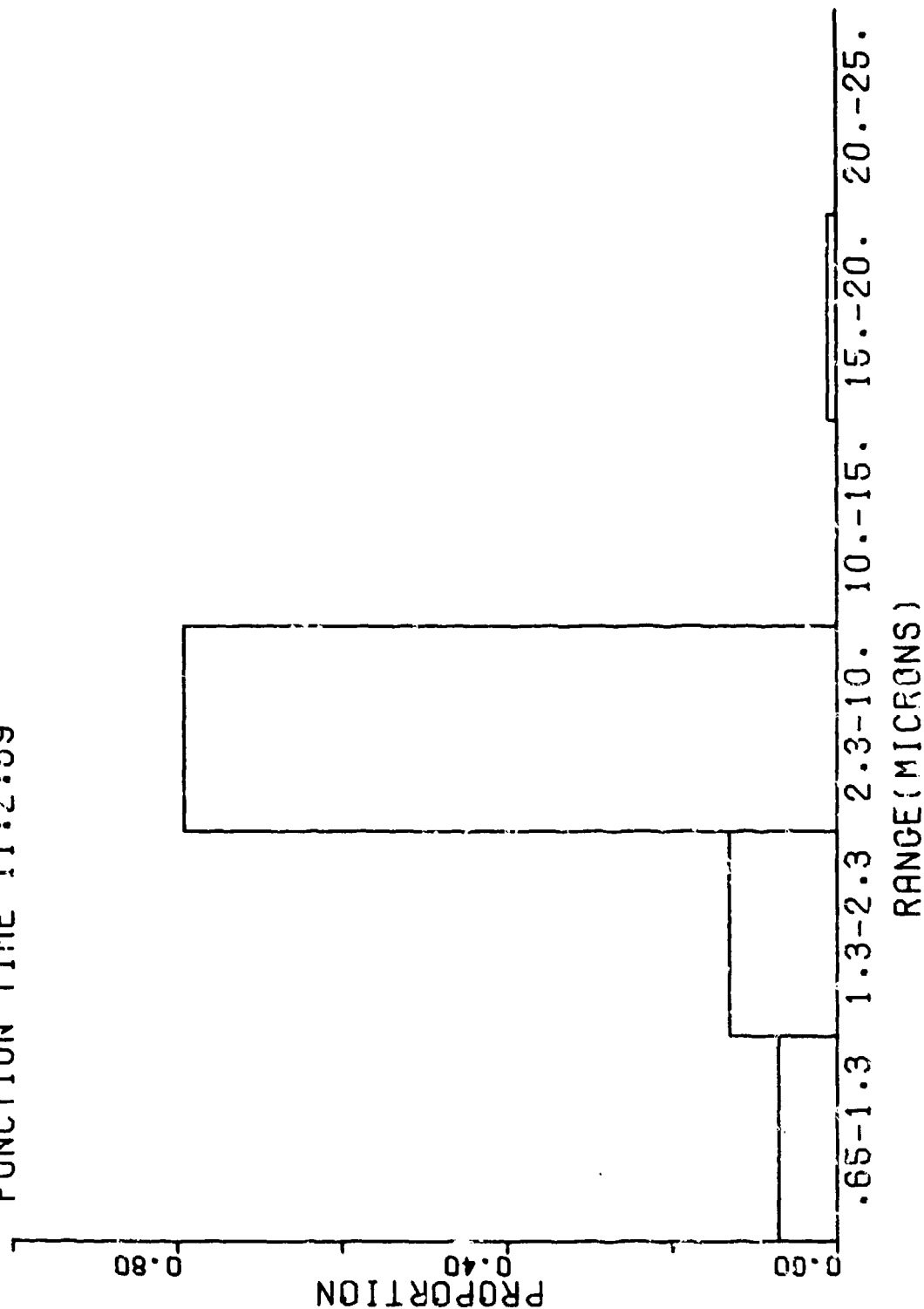
TRIAL #01 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:2:59  
AVERAGE NMD 3.37



AVERAGE NMD 95 A FUNCTION 0 TIME

PSA #2

TRIAL #D1 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:2:59

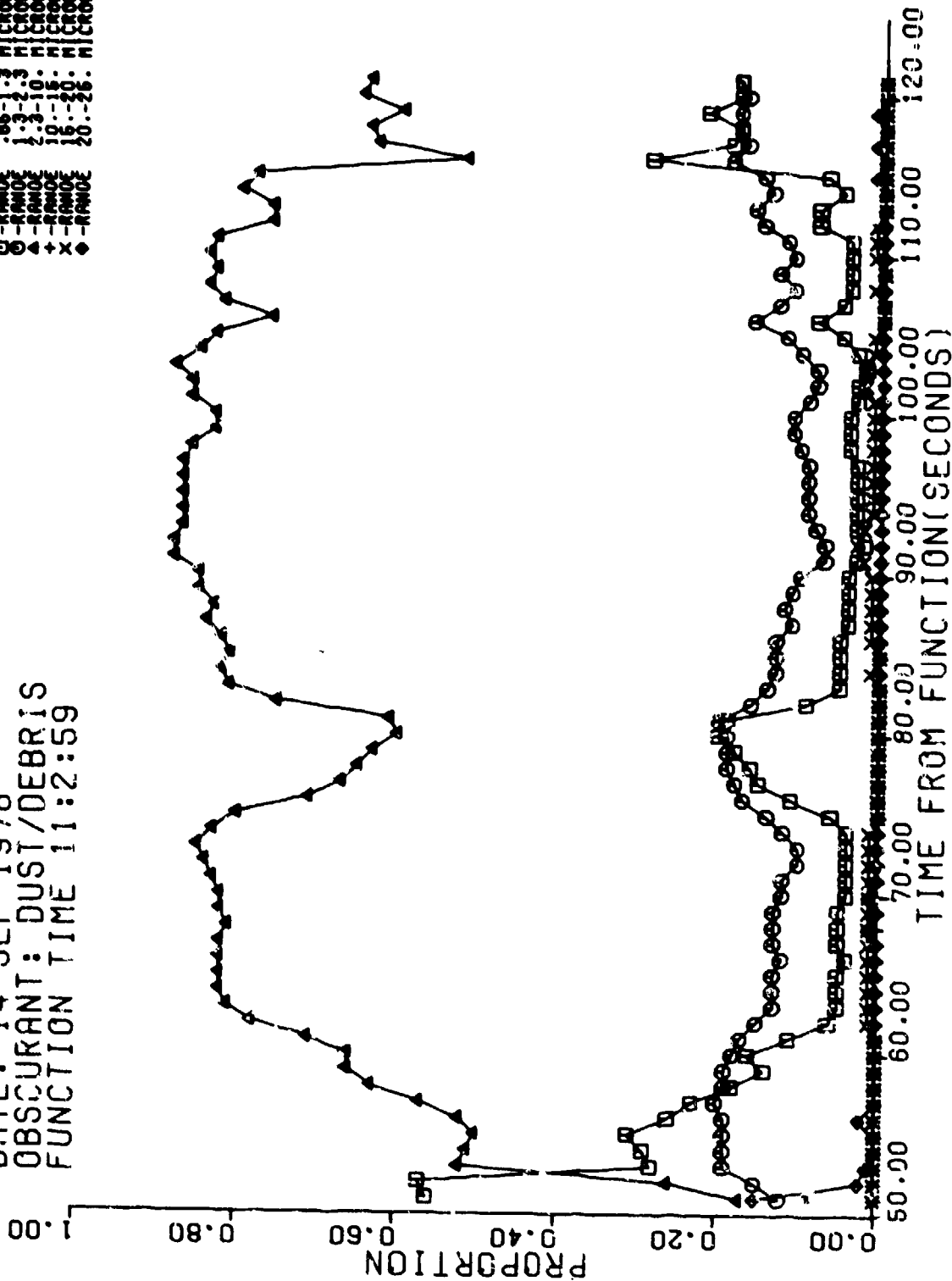


PARTICLE SIZE DISTRIBUTION BASED ON NUMBER

TRIAL #D1 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 11:2:59

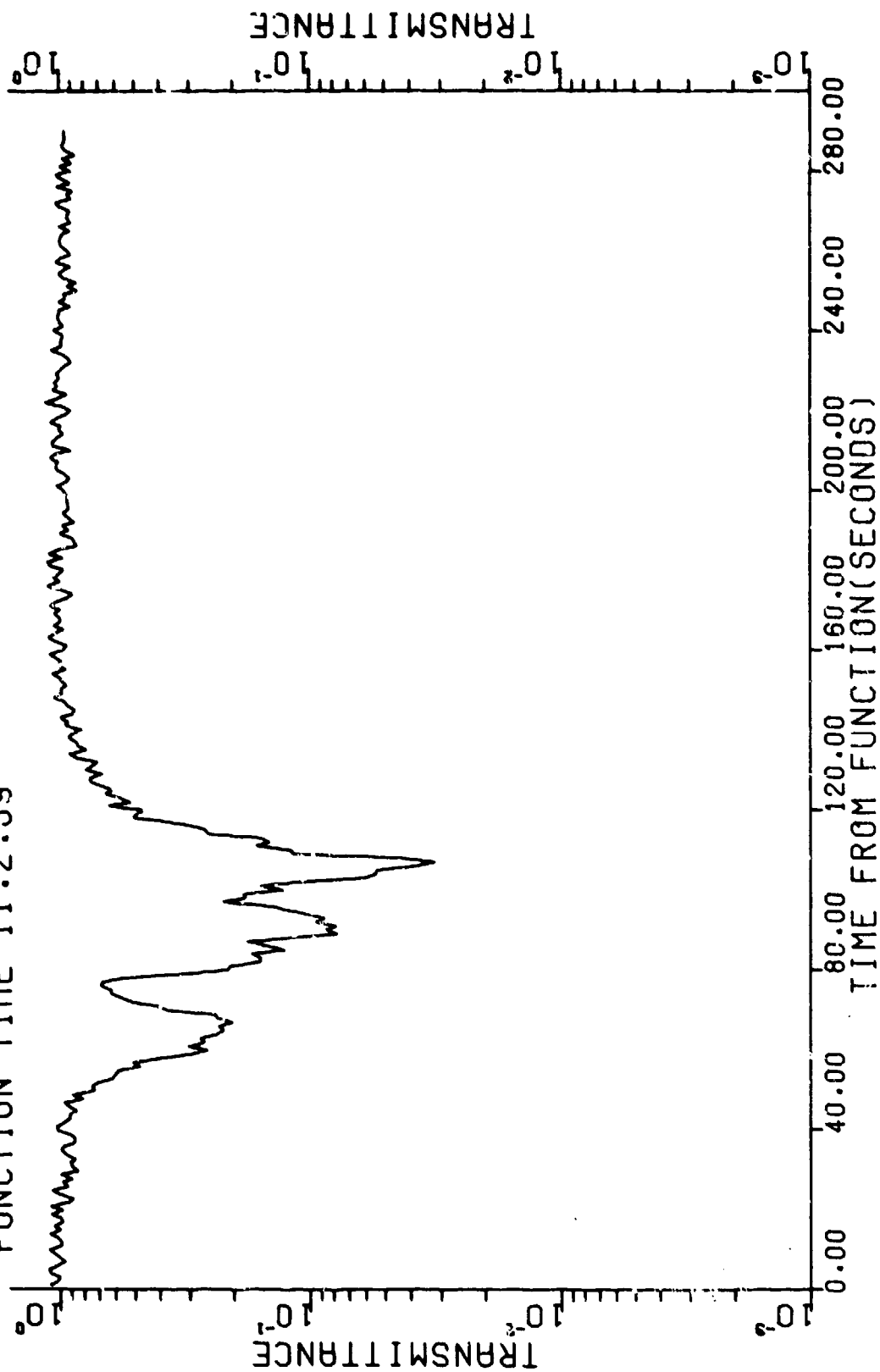
PSA #2

KEY  
 □ - RANGE 65-1.3 H/CROSS  
 ○ - RANGE 1.3-2.3 H/CROSS  
 △ - RANGE 2.3-10. H/CROSS  
 + - RANGE 10.-16. H/CROSS  
 ◆ - RANGE 16.-20. H/CROSS  
 ◆ - RANGE 20.-26. H/CROSS



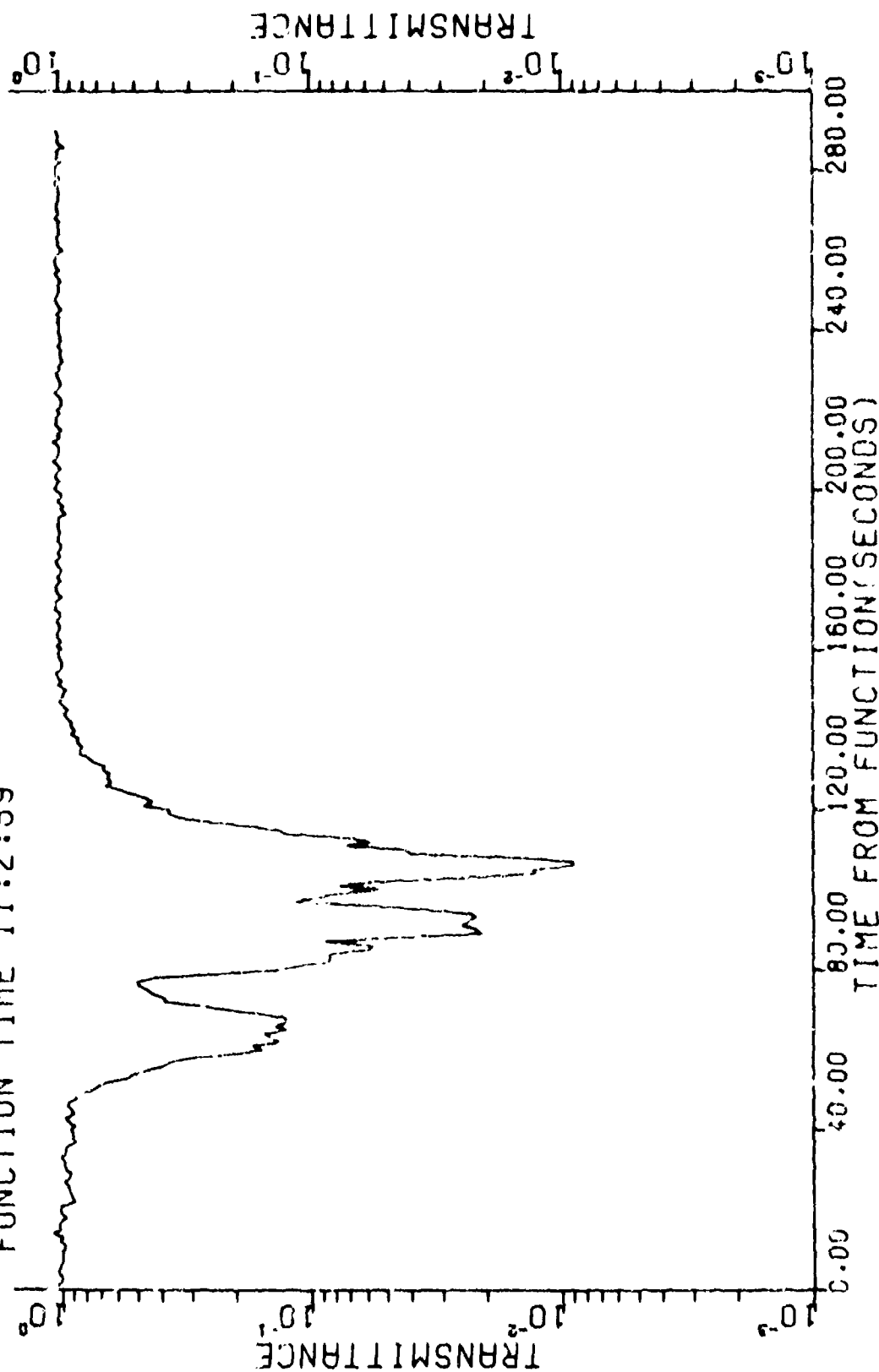
PROPORTION OF PARTICLES IN VARIOUS RANGES AS A FUNCTION OF TIME BASED ON NUMBER

TRIAL #D1 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:2:59



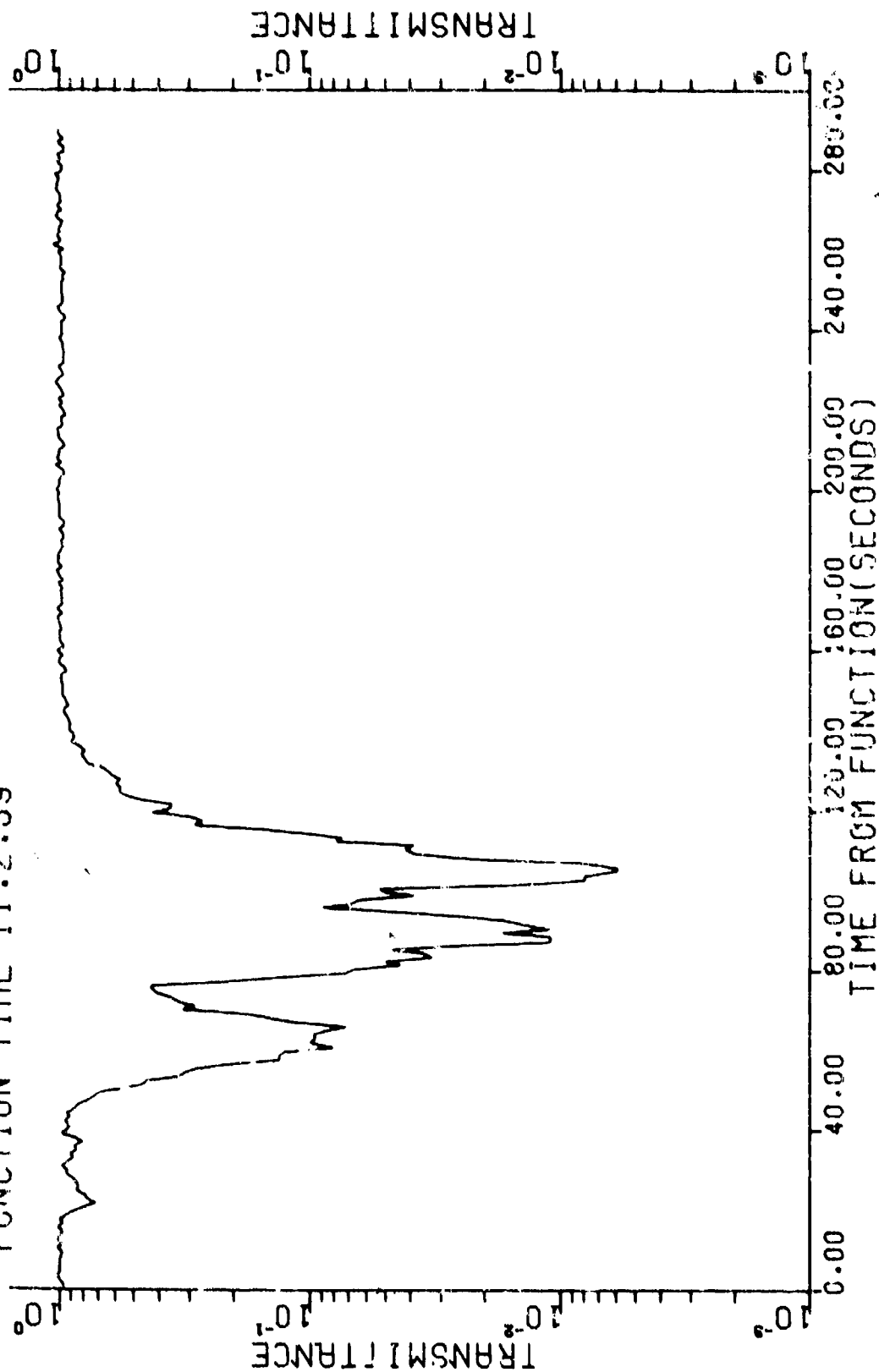
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED ON CENTER ROW

TRIAL #D1 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 11:2:59



TRANSMITTANCE VERSUS TIME FOR  
 WAVELENGTH 3.443 $\mu$ m LOCATED ( CENTER ROW

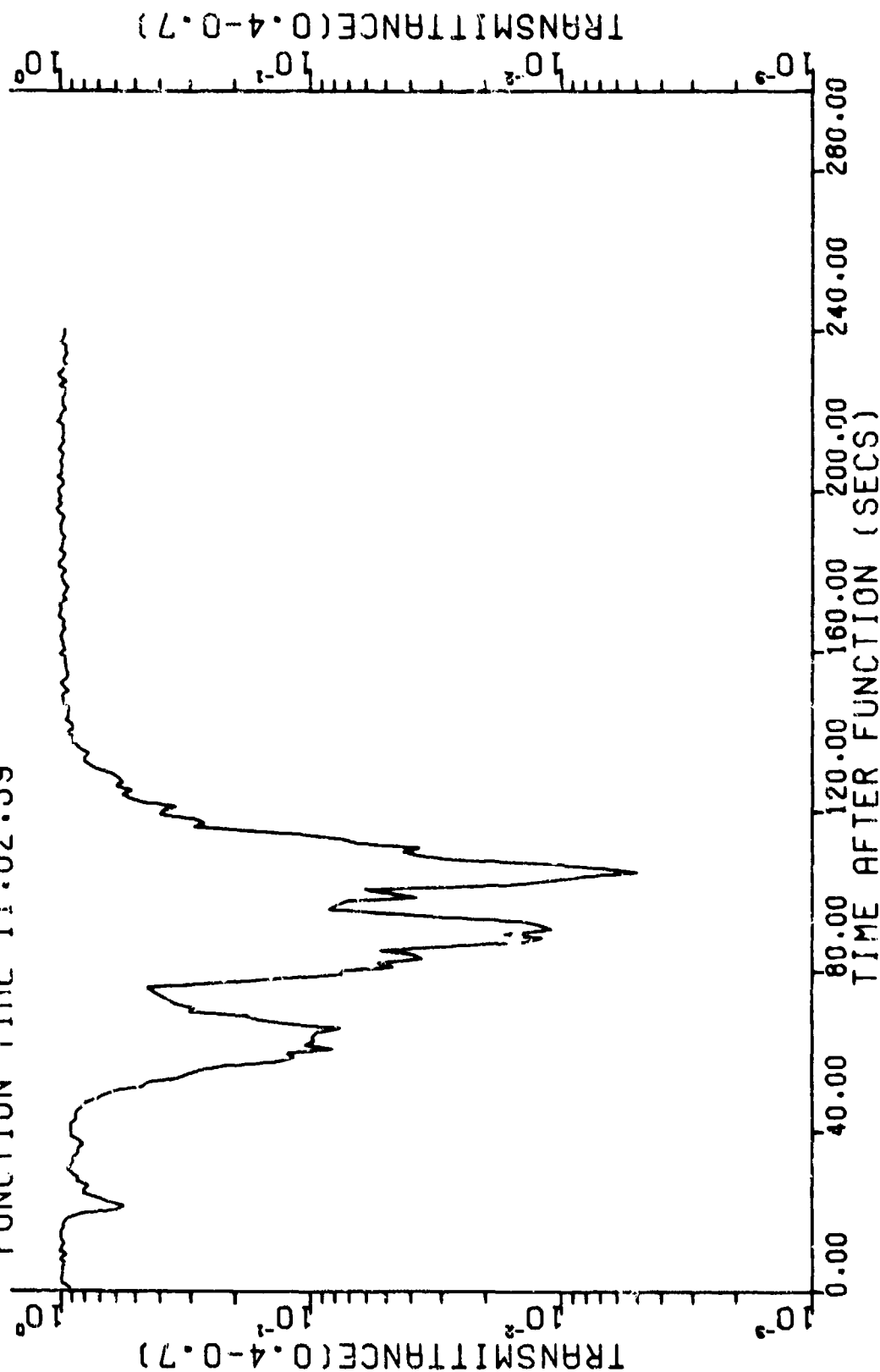
TRIAL #D1 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:2:59



TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

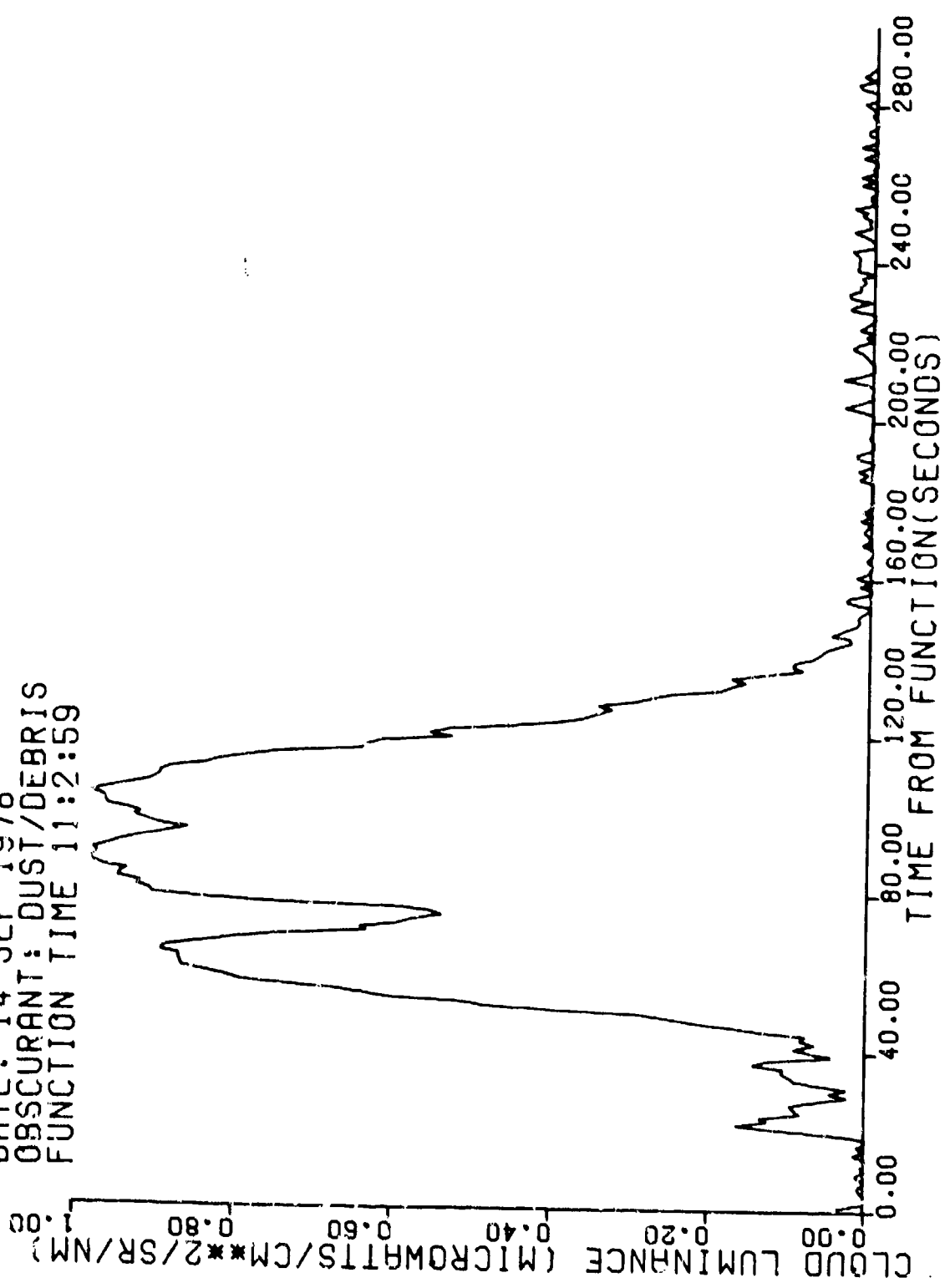


TRIAL 01, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 11:02:59



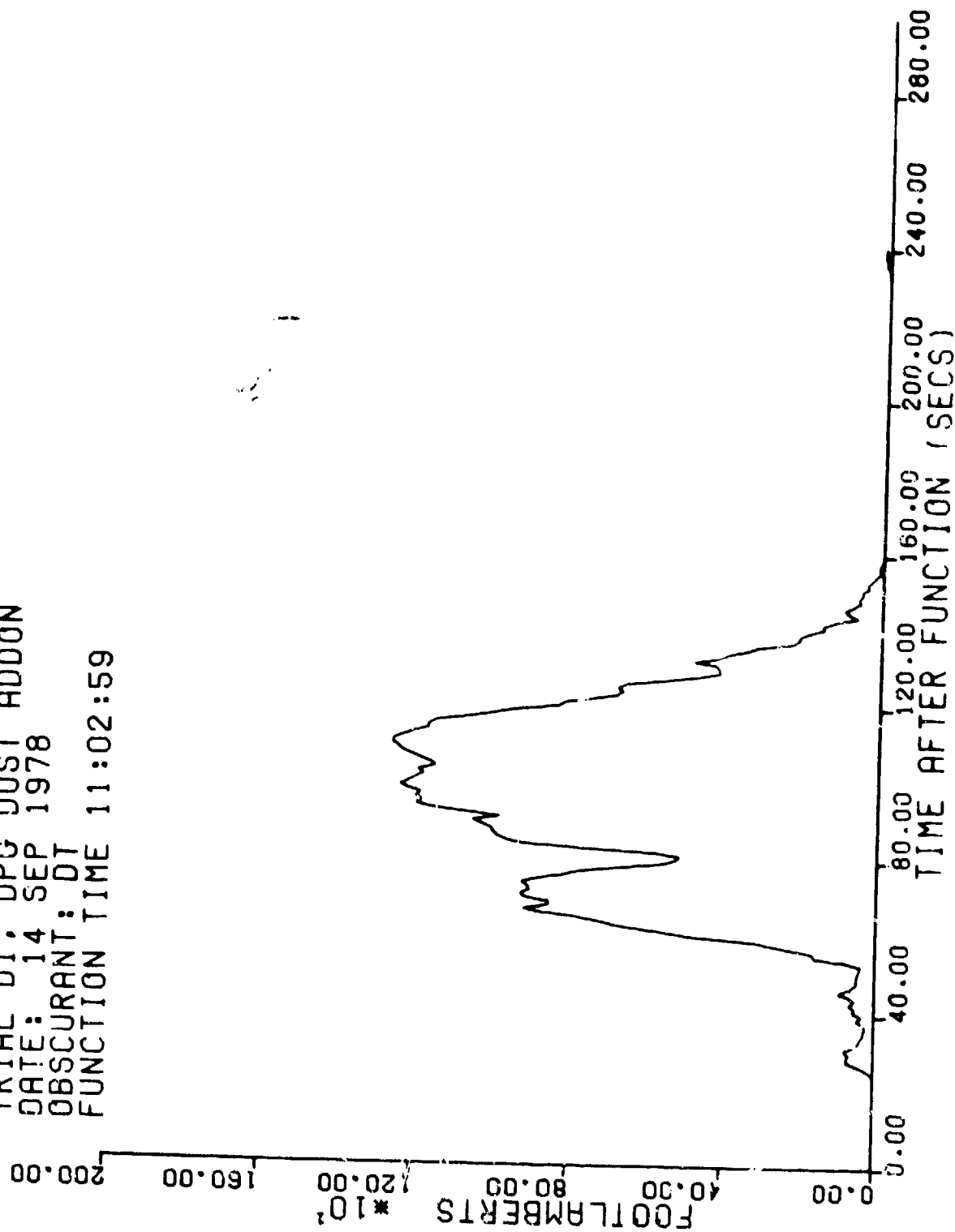
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEAS' IRED ALONG CENTER ROW

TRIAL #D1 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:2:59



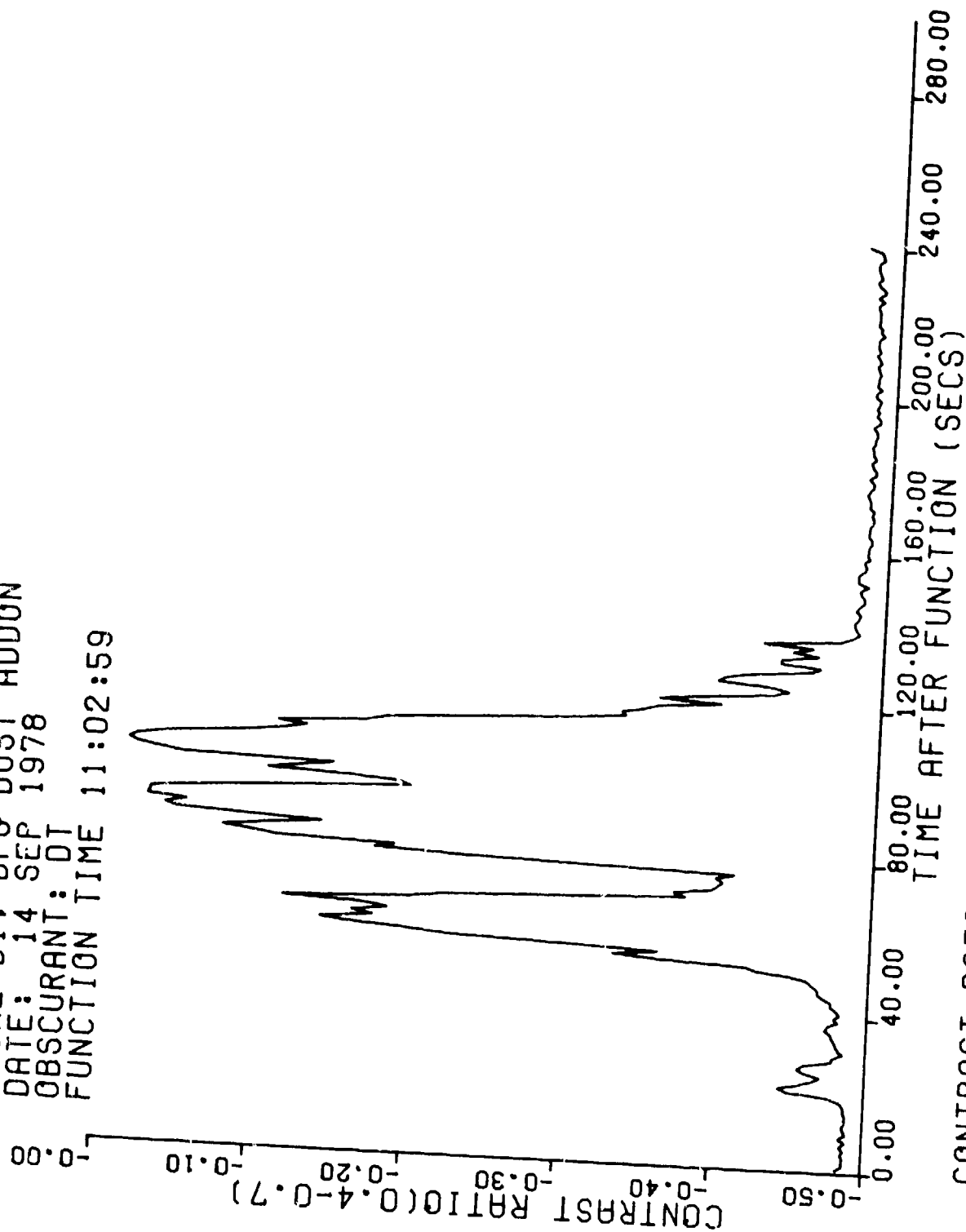
CLOUD LUMINANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

TRIAL D1: DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 11:02:59



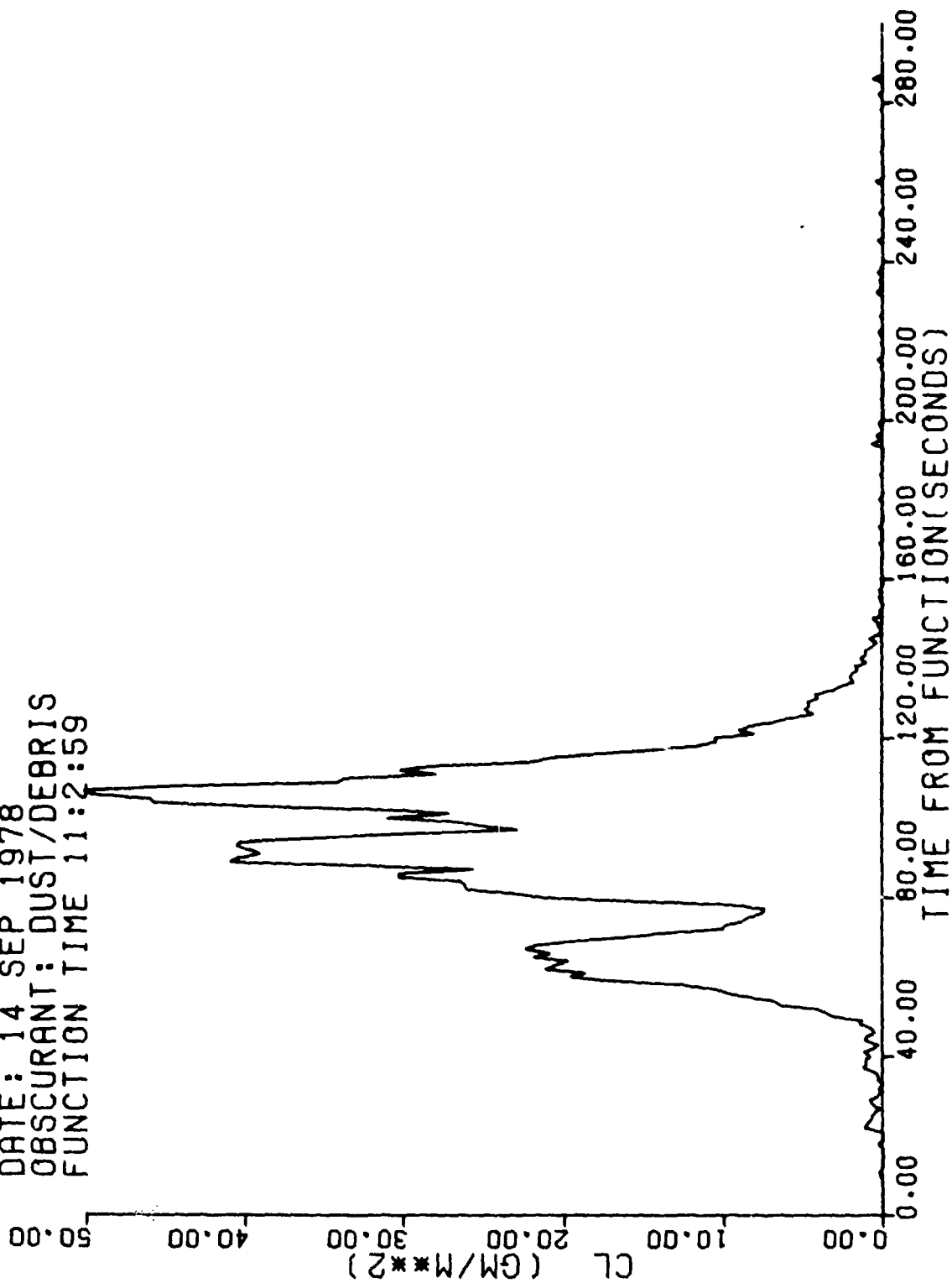
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL 01, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 11:02:59



CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #D1 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 11:2:59



CL VALUES VERSUS TIME FOR CFNTER ROW  
 CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

APPENDIX B, SECTION 2

CONTENTS

TRIAL D2, DPG DUST ADD-ON, 14 September 1976

PAGE	
B-7-2	TABLE: TEST DAY DATA
No Data	FIGURE: DOSAGE ALONG SAMPLING LINE
B-7-3	FIGURE: AVERAGE NMD VERSUS TIME
B-7-4	FIGURE: PARTICLE SIZE DISTRIBUTION
B-7-5	FIGURE: PROPORTION OF PARTICLES VERSUS TIME
B-7-6	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu$ m
B-7-7	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu$ m
B-7-8	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu$ m
B-7-9	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu$ m
B-7-10	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu$ m
B-7-11	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu$ m
B-7-12	FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu$ m
B-7-13	FIGURE: CL VALUES VERSUS TIME

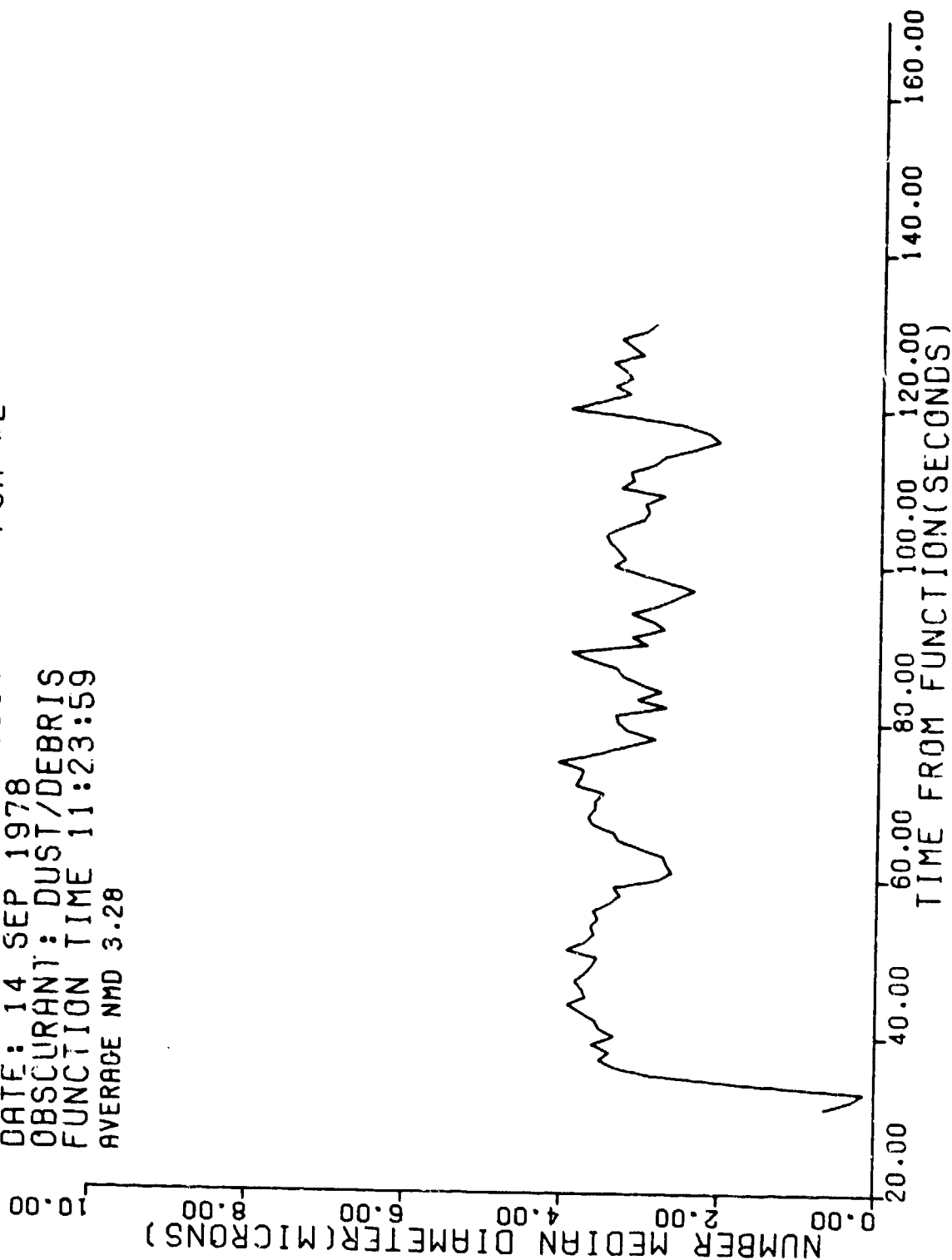
IDENTIFICATION:

Trial Number: D2 (DP1-005)  
Date of Trial 14 Sept 78  
Function Time: 11:23:59

<u>Particle Size Range</u>	<u>Proportion %</u>
0.65 - 1.3	8
1.3 - 2.3	14
2.3 - 10.0	77
10.0 - 15.0	0
15.0 - 20.0	1
> - 20.0	0

NMD ( $\mu\text{m}$ ) 3.28

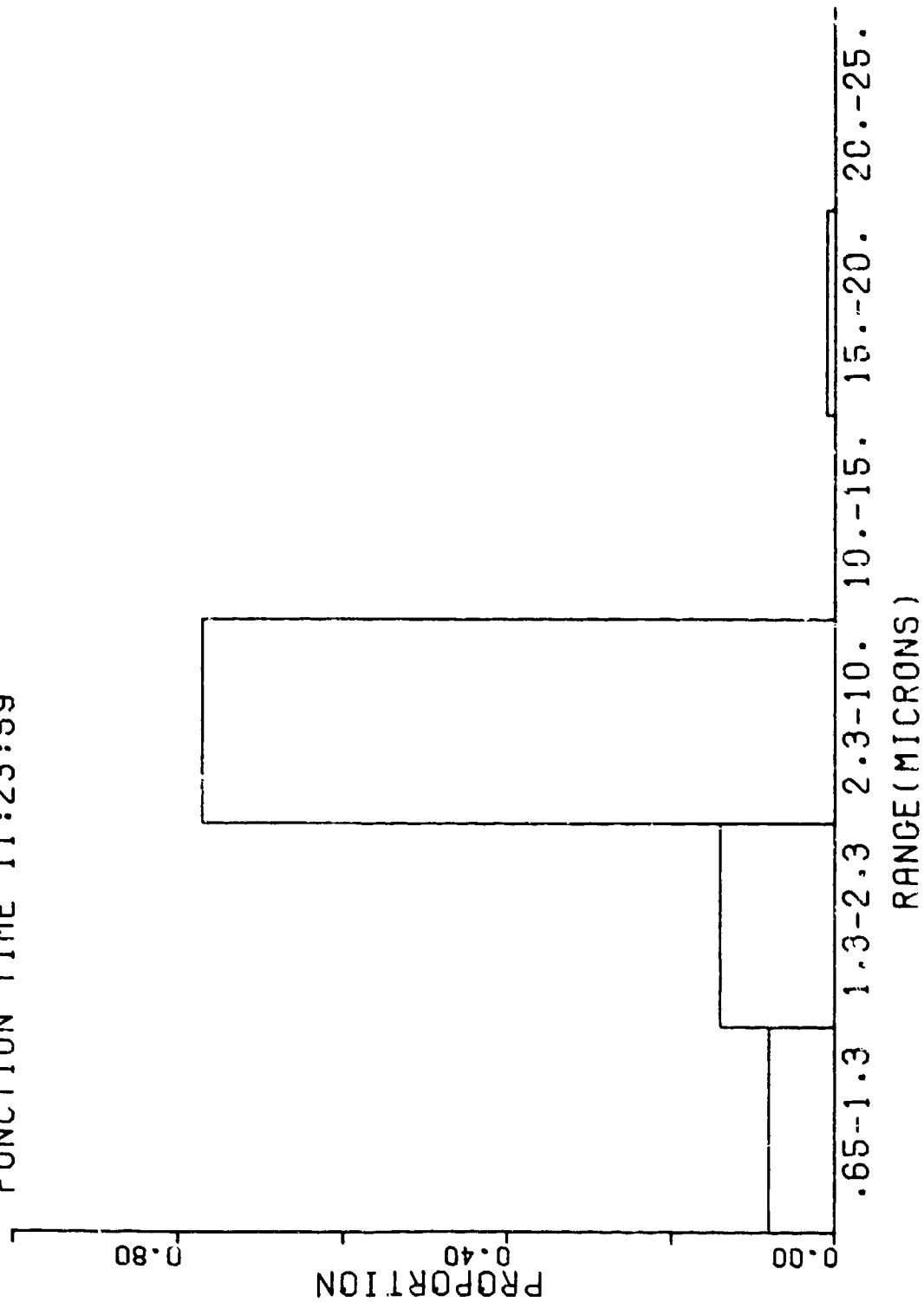
TRIAL #D2 (DP1-005) PSA #2  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:23:59  
AVERAGE NMD 3.28



AVERAGE NMD AS A FUNCTION OF TIME



TRIAL #D2 (DP1-005)      PSA #2  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 11:23:59

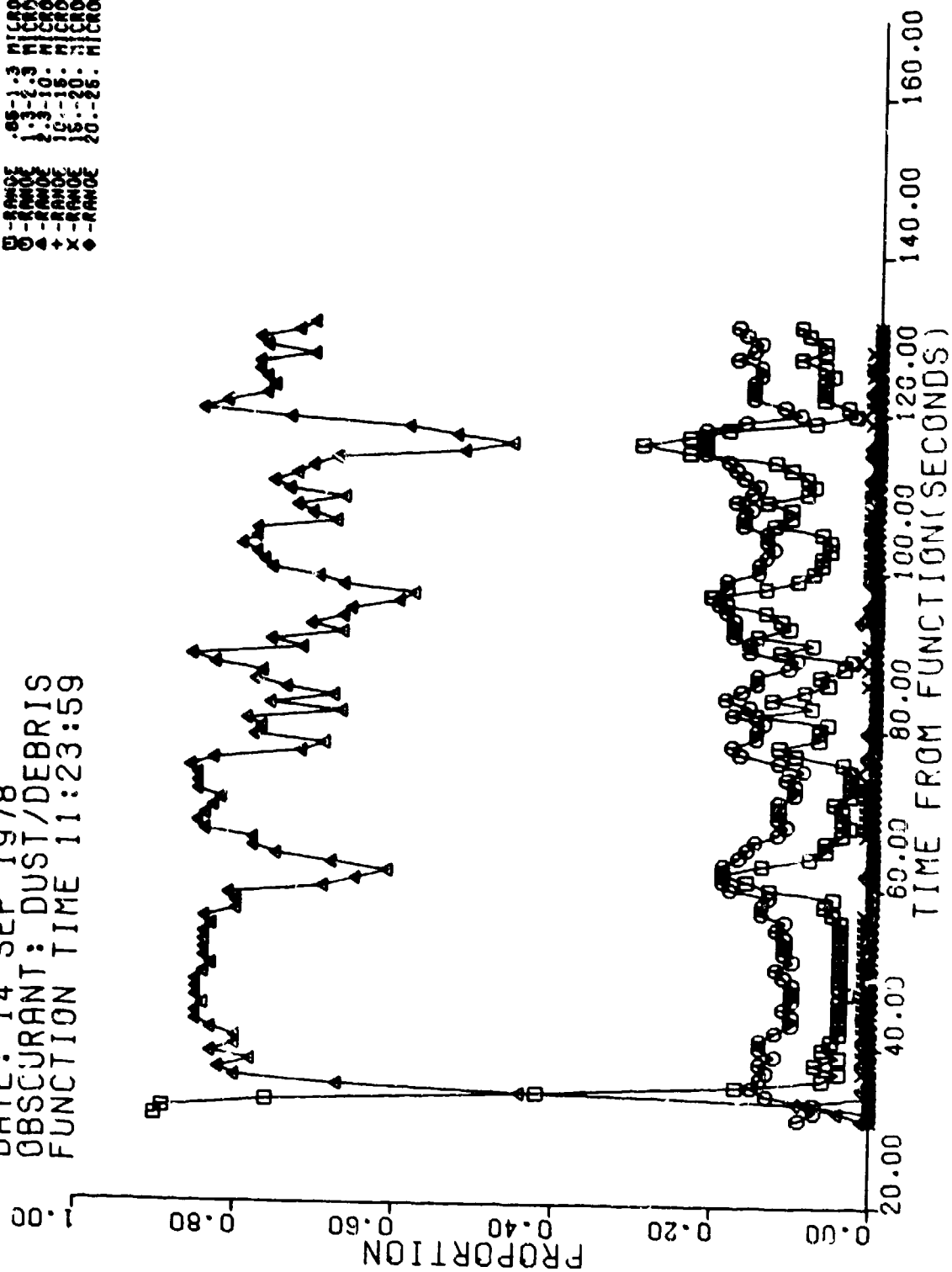


PARTICLE SIZE DISTRIBUTION USED ON NUMBER

PSA 2

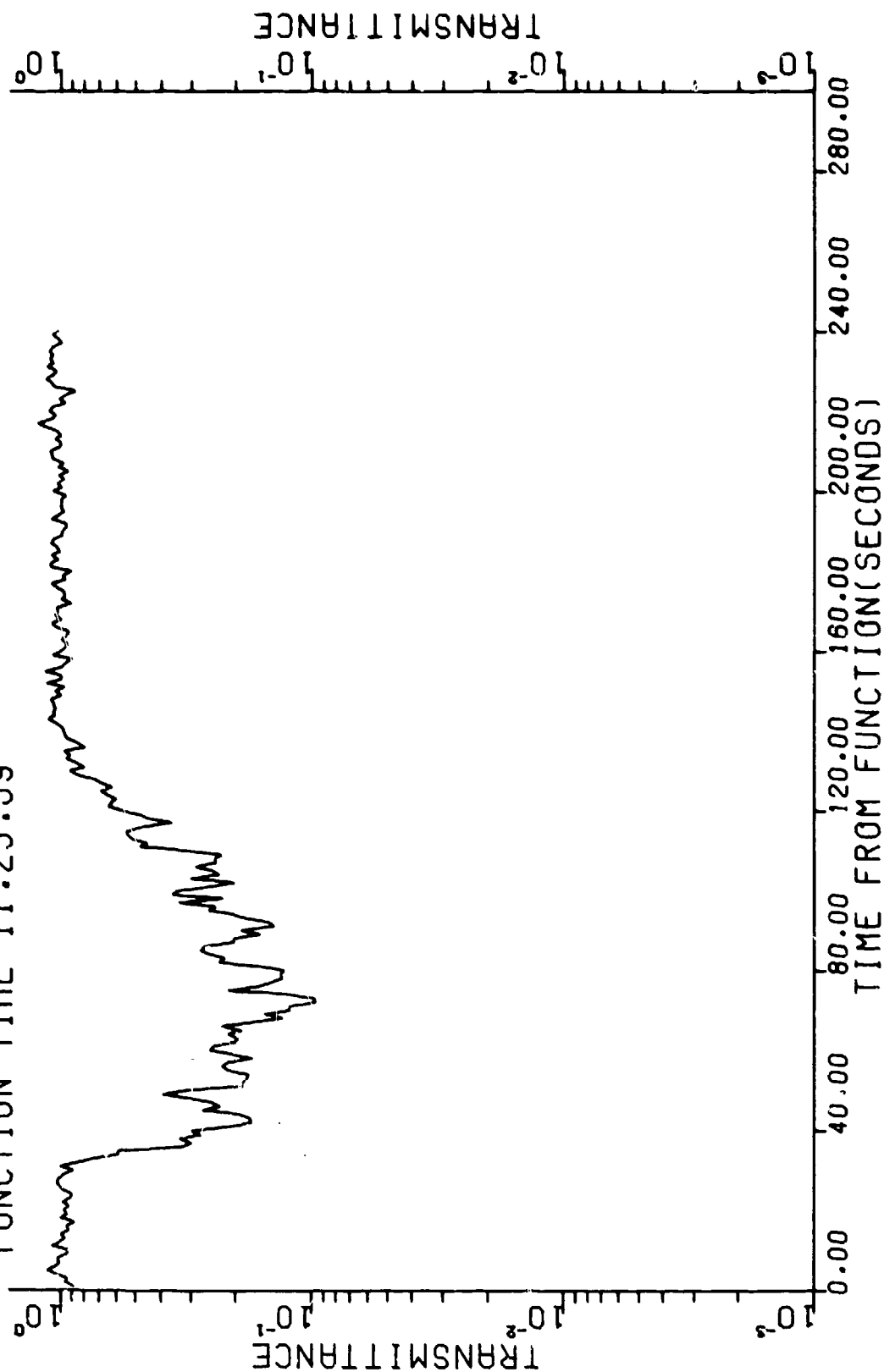
KEY

□	- RANOL	05	1	05	00	00	00	00	00
□	- RANOL	05	1	05	00	00	00	00	00
+	- RANOL	05	1	05	00	00	00	00	00
x	- RANOL	05	1	05	00	00	00	00	00
●	- RANOL	05	1	05	00	00	00	00	00



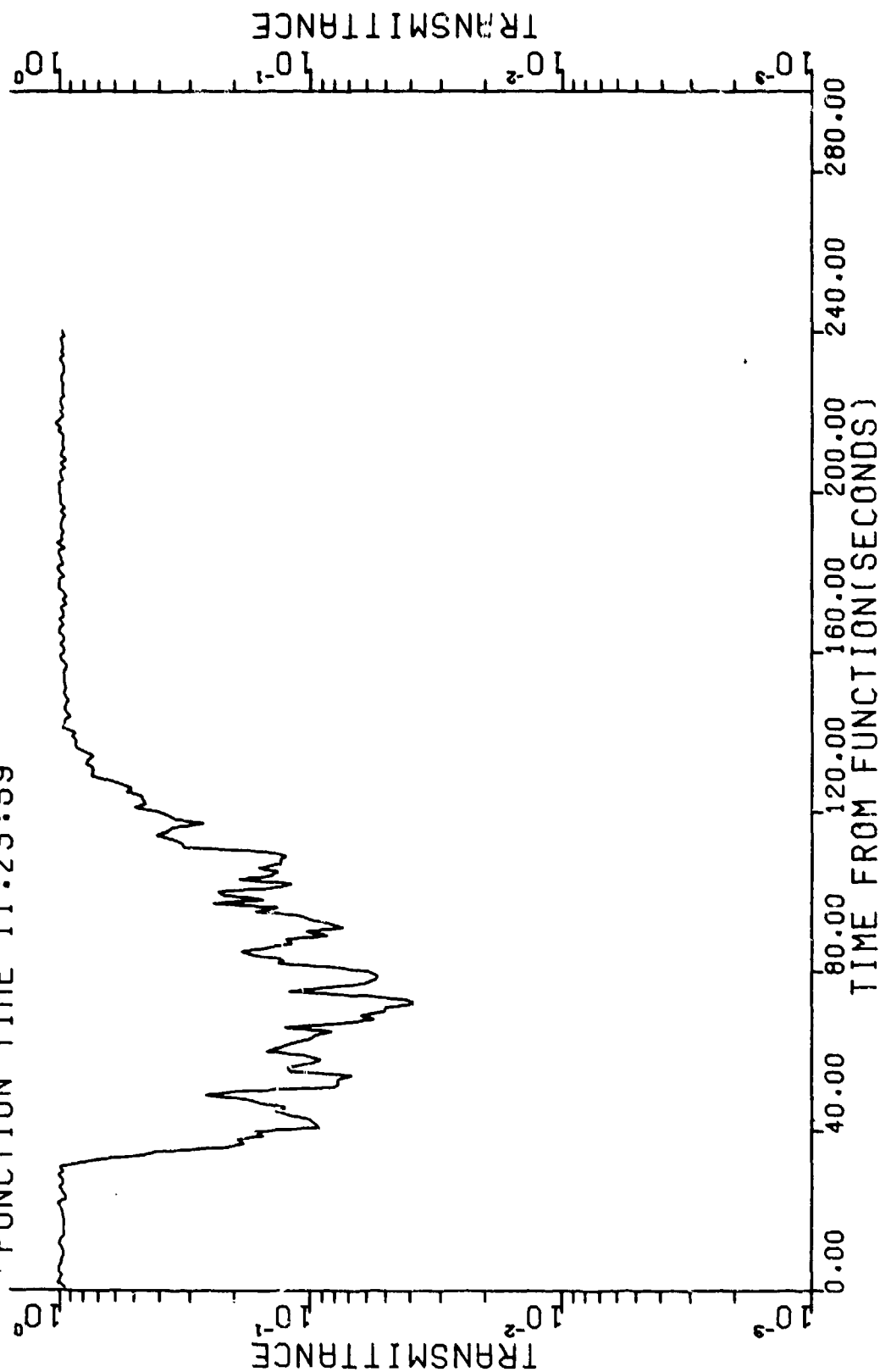
PROPORTION OF PARTICLES IN VARIOUS RANGES AS A FUNCTION OF TIME BASED ON NUMBER

TRIAL #D2 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:23:59



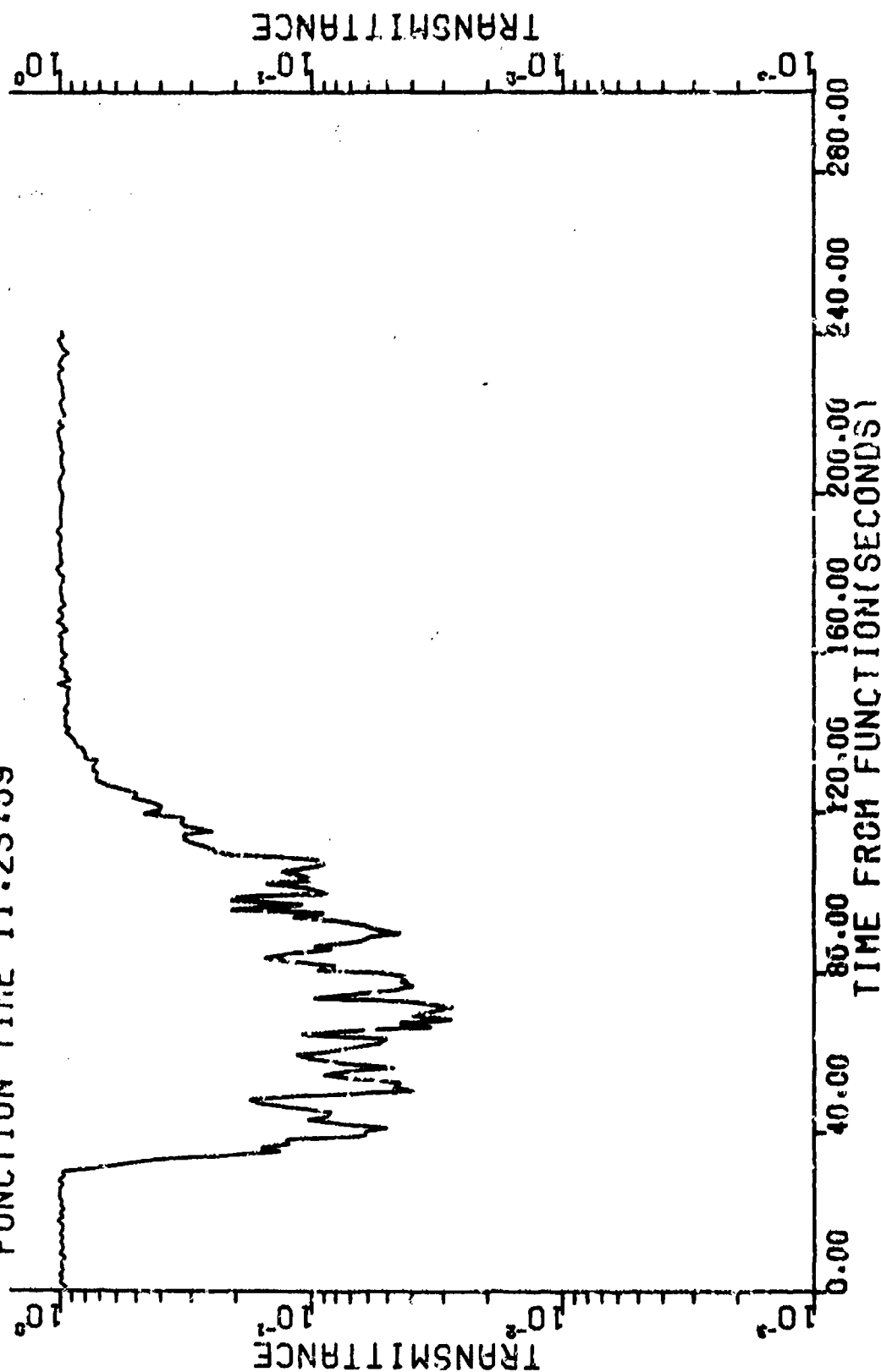
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED ( CENTER ROW

TRIAL #D2 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:23:59



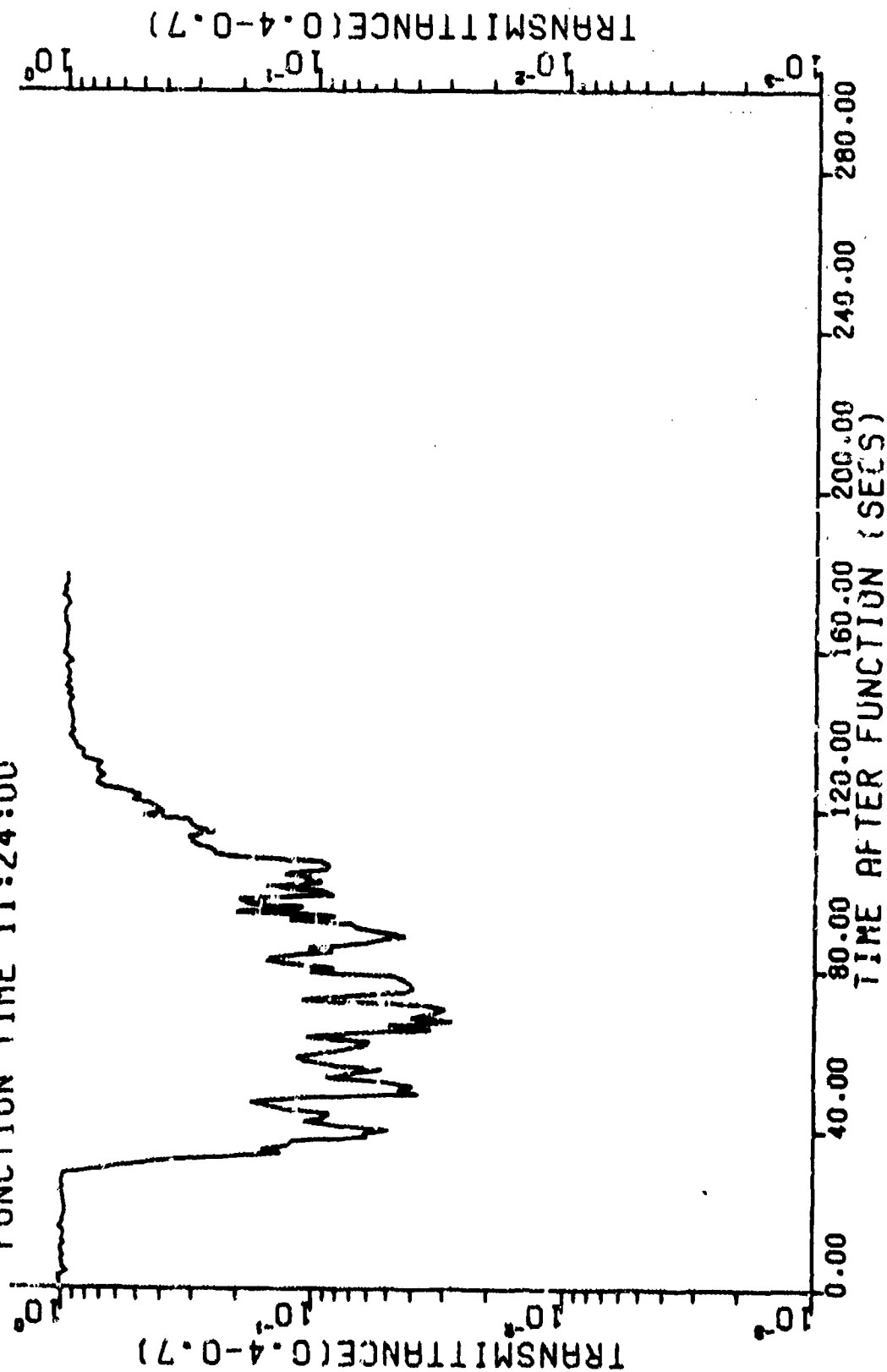
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED ON CENTER ROW

TRIAL #02 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:23:59



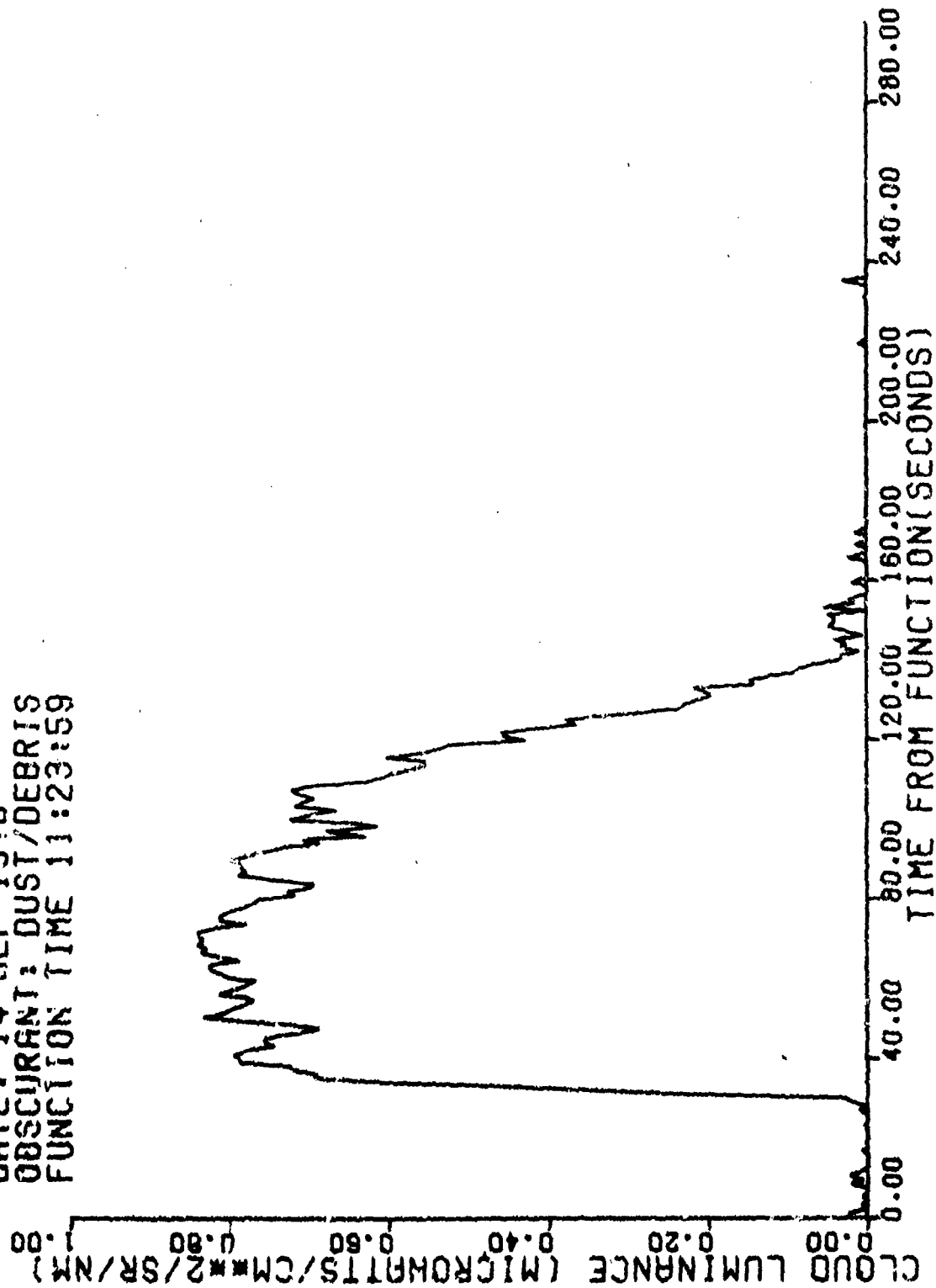
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060μm LOCATED ON CENTER ROW

TRIAL 02: DPG DUST ADDON  
 DATE: 14 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 11:24:00



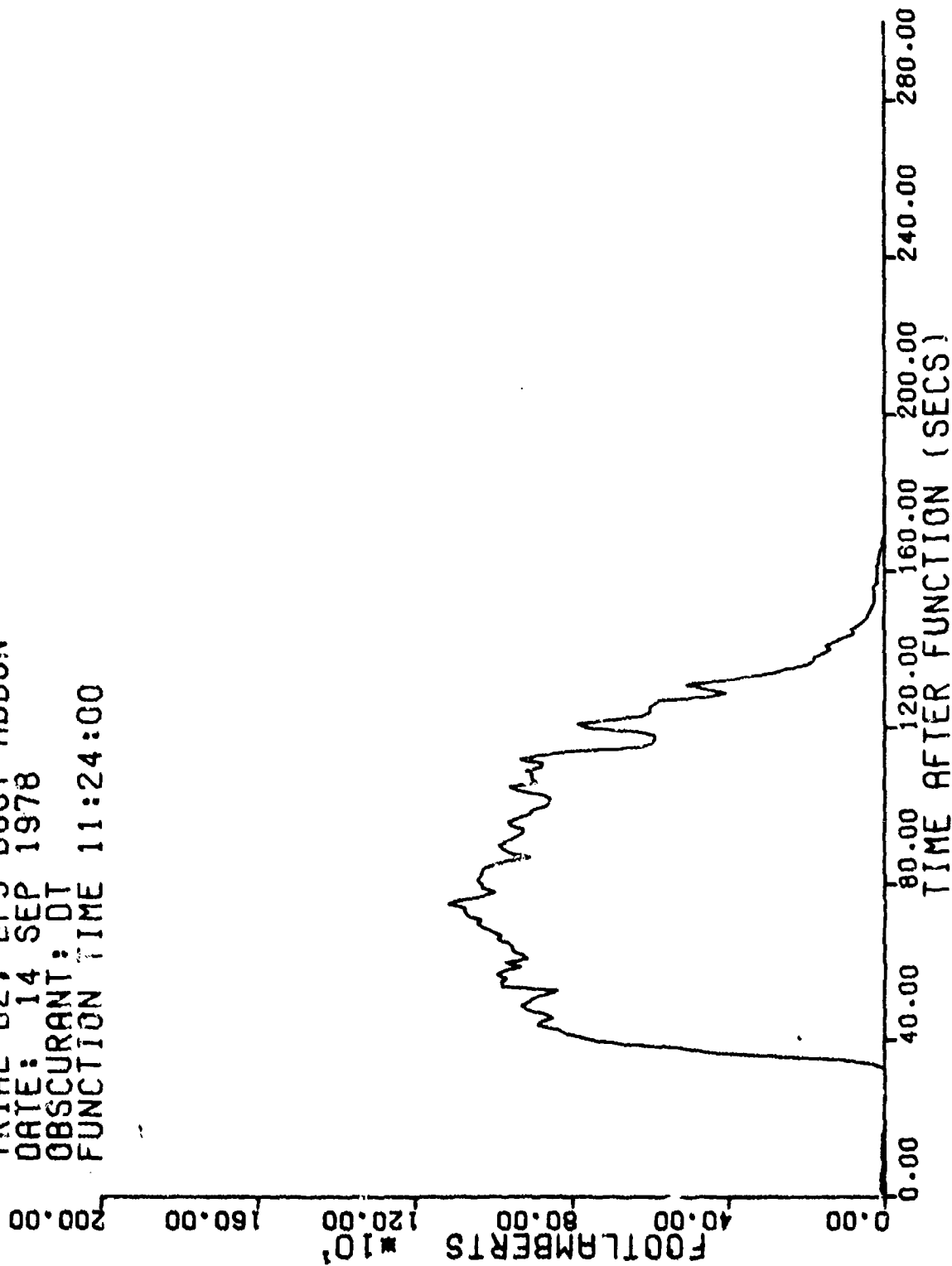
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #02 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSERVANT: DUST/DEBRIS  
 FUNCTION TIME 11:23:59



CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060μm LLATED ON CENTER ROW

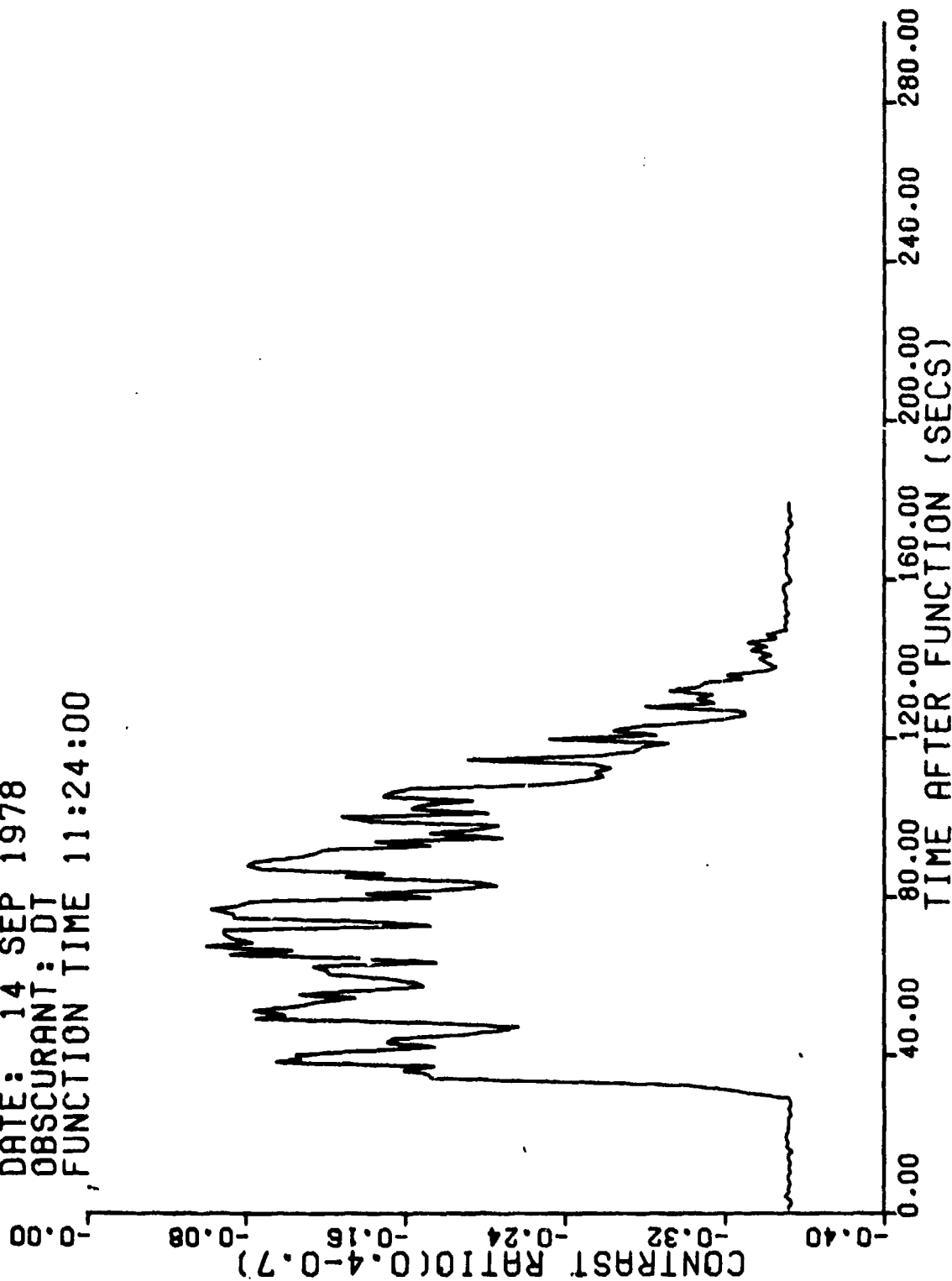
TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 11:24:00



CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

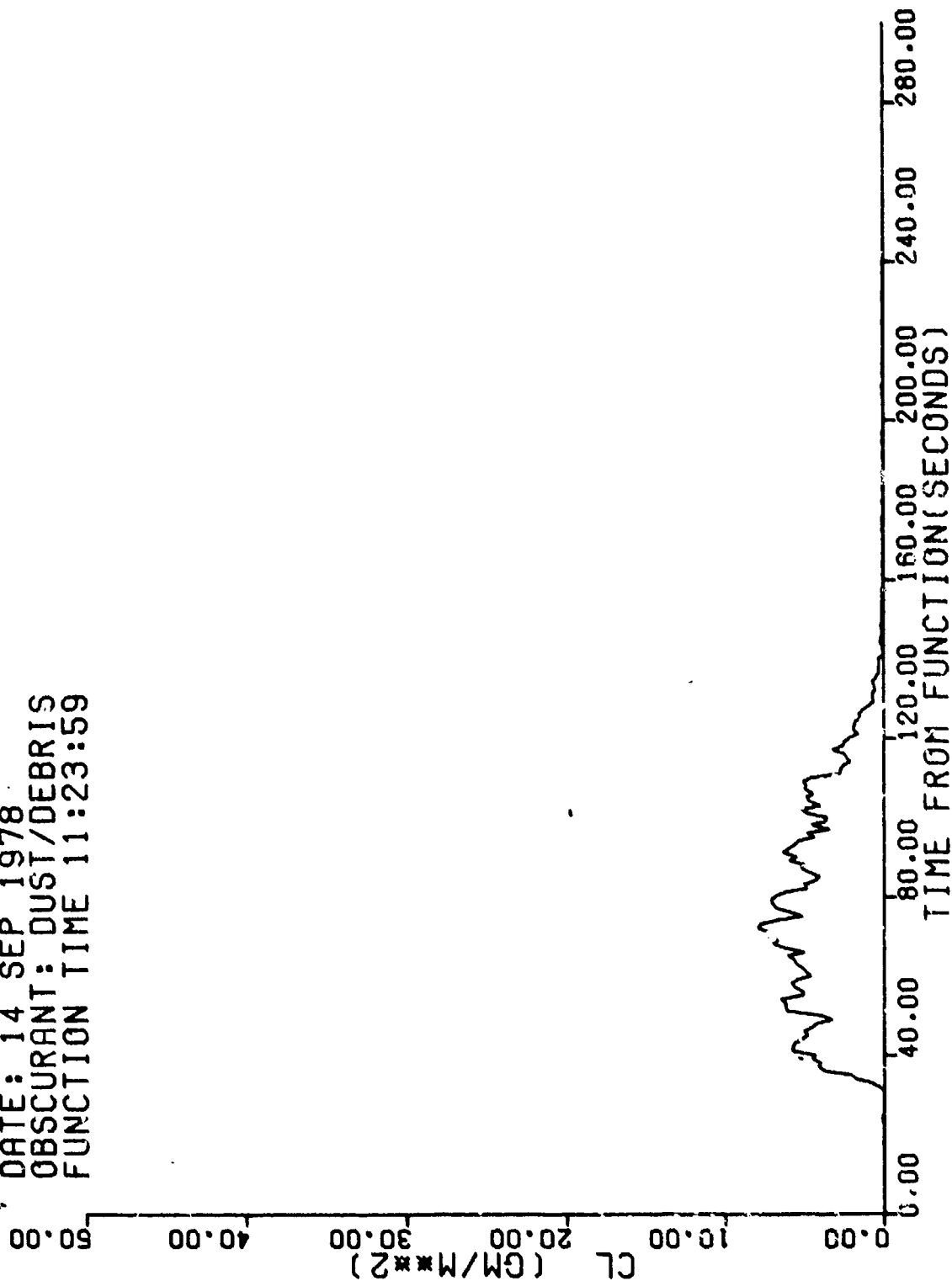


TRIAL D2, DPG DUST ADDON  
 DATE: 14 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 11:24:00



CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #D2 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:23:59



CL VALUES VERSUS TIME FOR CENTER ROW  
CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

## APPENDIX B, SECTION B

### CONTENTS

TRIAL 03, DPG DUST ADD-ON, 14 September 1978

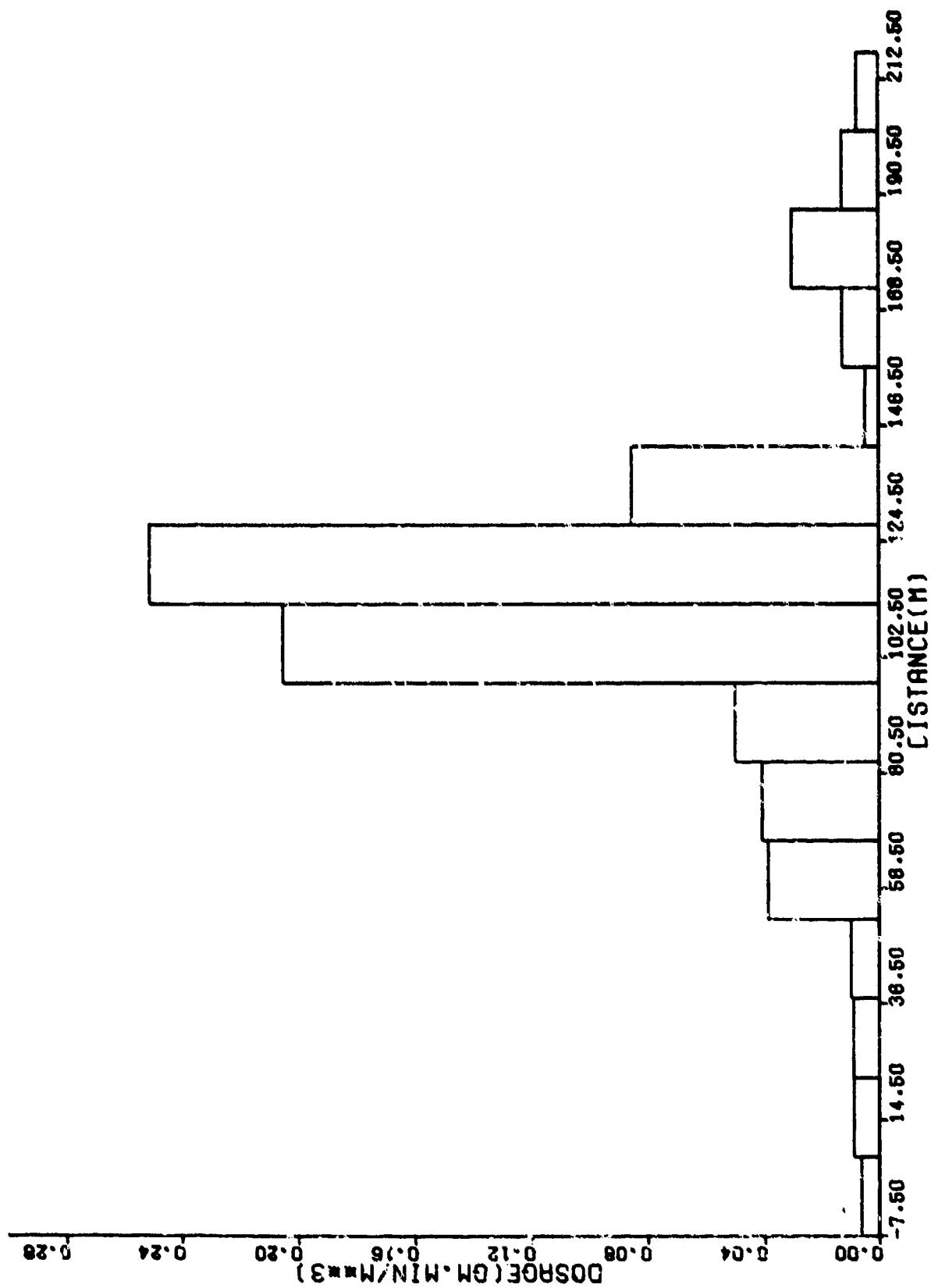
PAGE	
B-8-2	TABLE: TEST DAY DATA
B-8-3	FIGURE: DOSAGE ALONG SAMPLING LINE
B-8-4	FIGURE: AVERAGE NMD VERSUS TIME
B-8-5	FIGURE: PARTICLE SIZE DISTRIBUTION
B-8-6	FIGURE: PROPORTION OF PARTICLES VERSUS TIME
B-8-7	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu\text{m}$
B-8-8	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu\text{m}$
B-8-9	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-8-10	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-8-11	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-8-12	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-8-13	FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-8-14	FIGURE: CL VALUES VERSUS TIME

IDENTIFICATION:

Trial Number: D3 (DP1-005)  
 Date of Trial: 14 Sept 78  
 Function Time: 11:59:59

<u>Particle Size Range</u>	<u>Proportion %</u>
0.65 - 1.3	3
1.3 - 2.3	10
2.3 - 10.0	85
10.0 - 15.0	0
15.0 - 20.0	1
> - 20.0	0

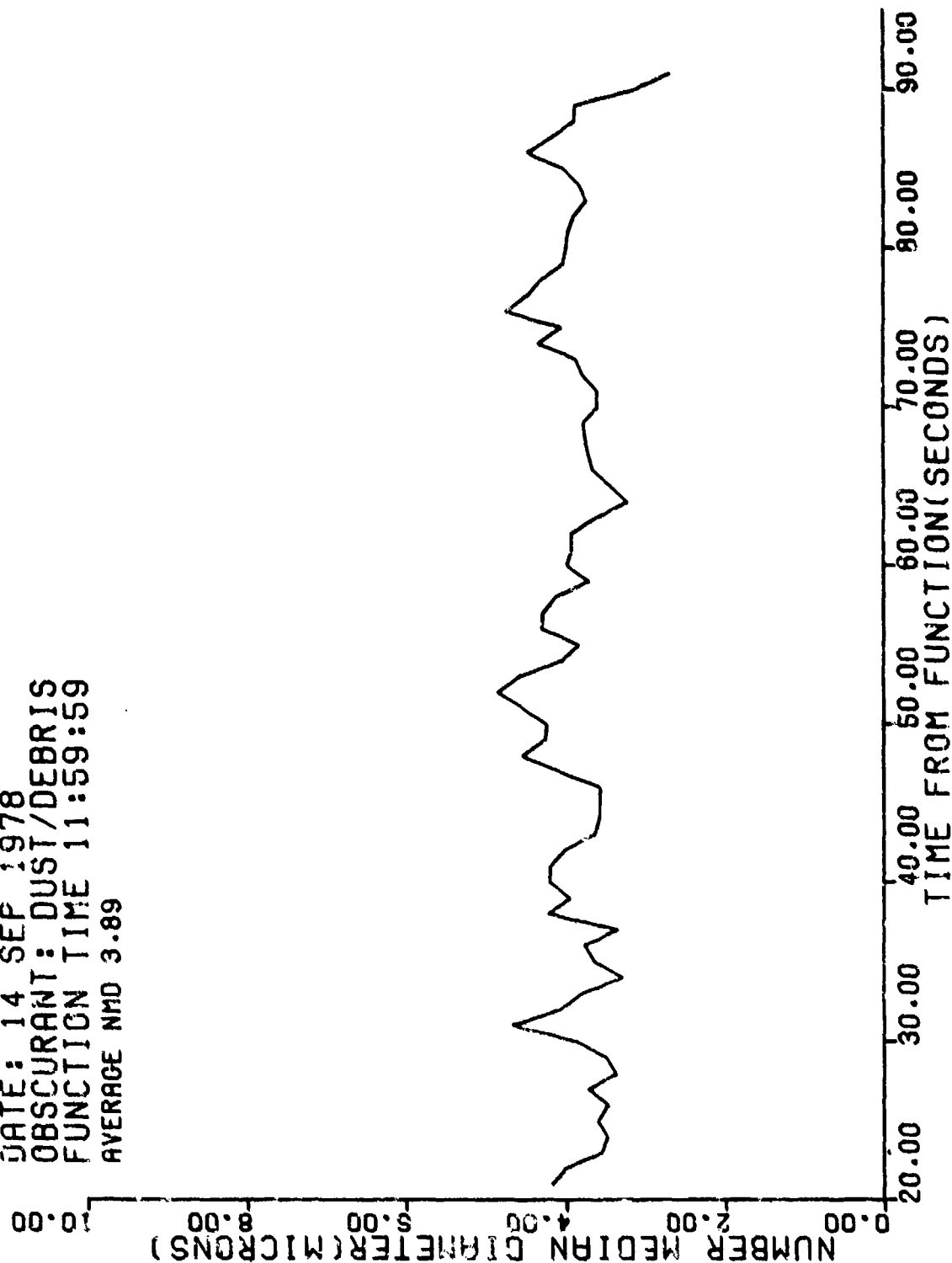
Log<sub>10</sub> NMD 0.590  
 $\sigma$ <sub>10</sub>  
 Log<sub>10</sub> NMD 0.231  
 NMD ( $\mu$ m) 3.89



TRIAL D3, DPG DUST ADD-ON. 14 SEP 1978, 11:59:59, DUST

PSA #2

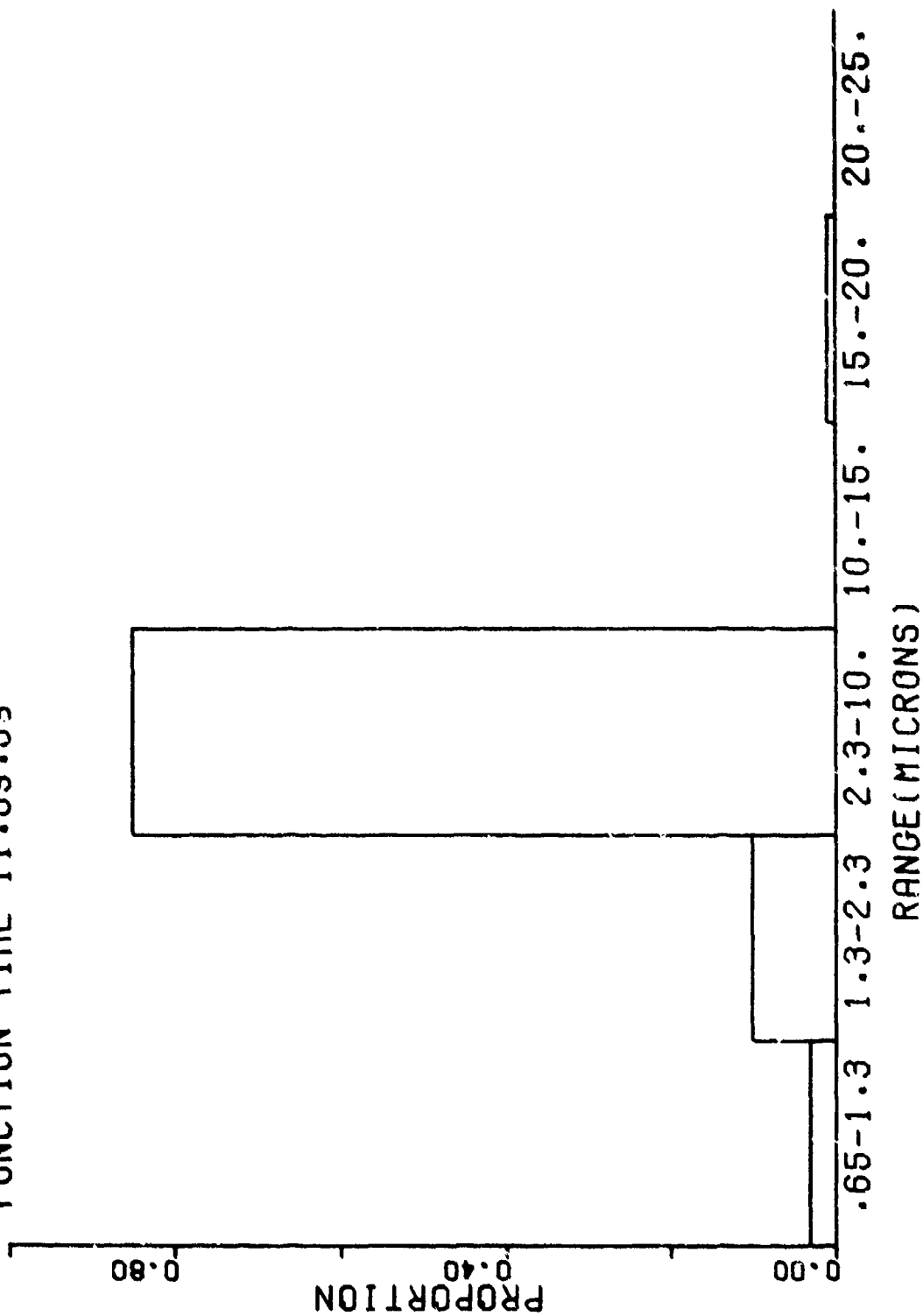
TRIAL #03 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:59:59  
AVERAGE NMD 3.89



AVERAGE NMD AS A FUNCTION OF TIME

PSA #2

TRIAL #D3 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:59:59

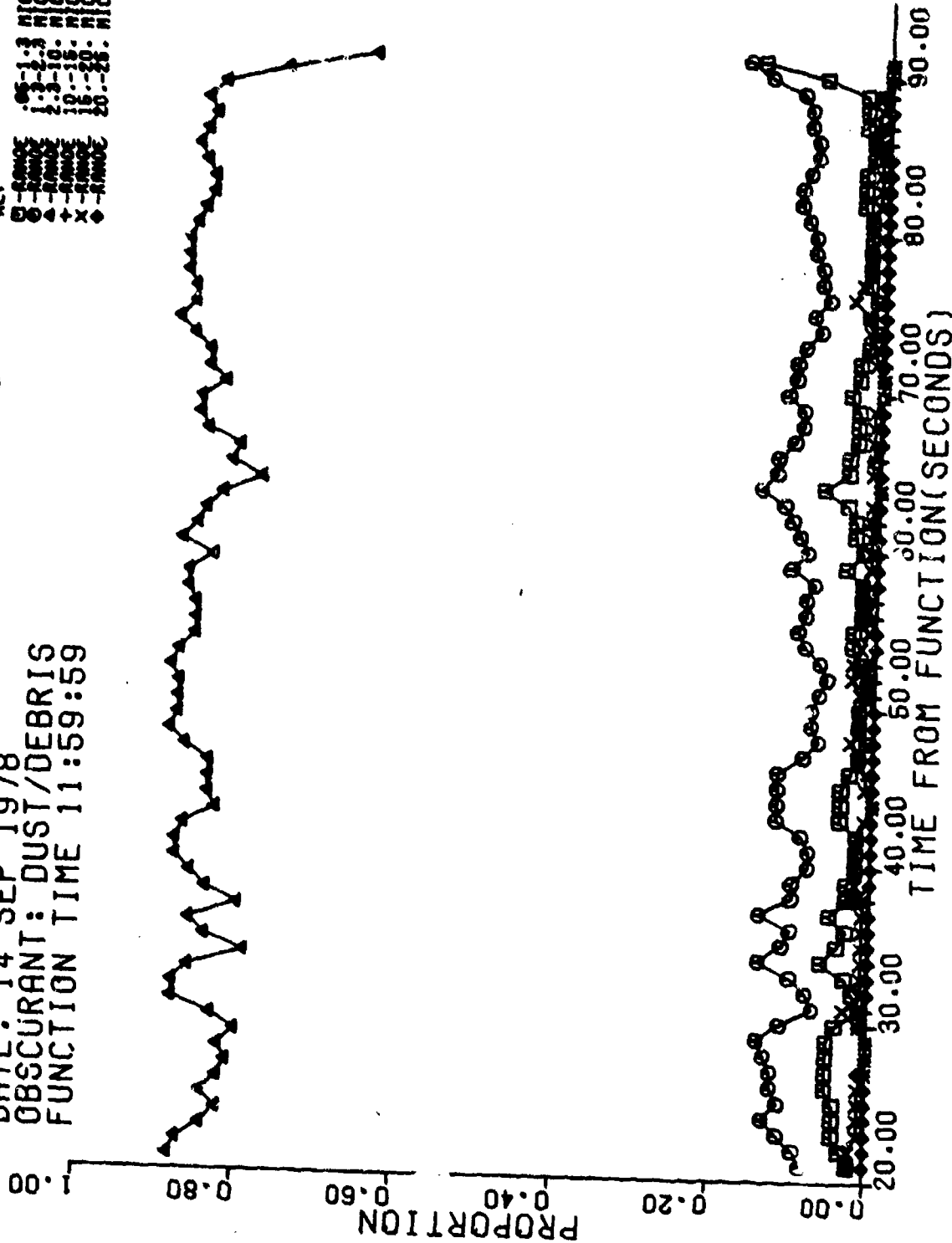


PARTICLE SIZE DISTRIBUTION BASED ON NUMBER

TRIAL #D3 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 11:59:59

PSA #2

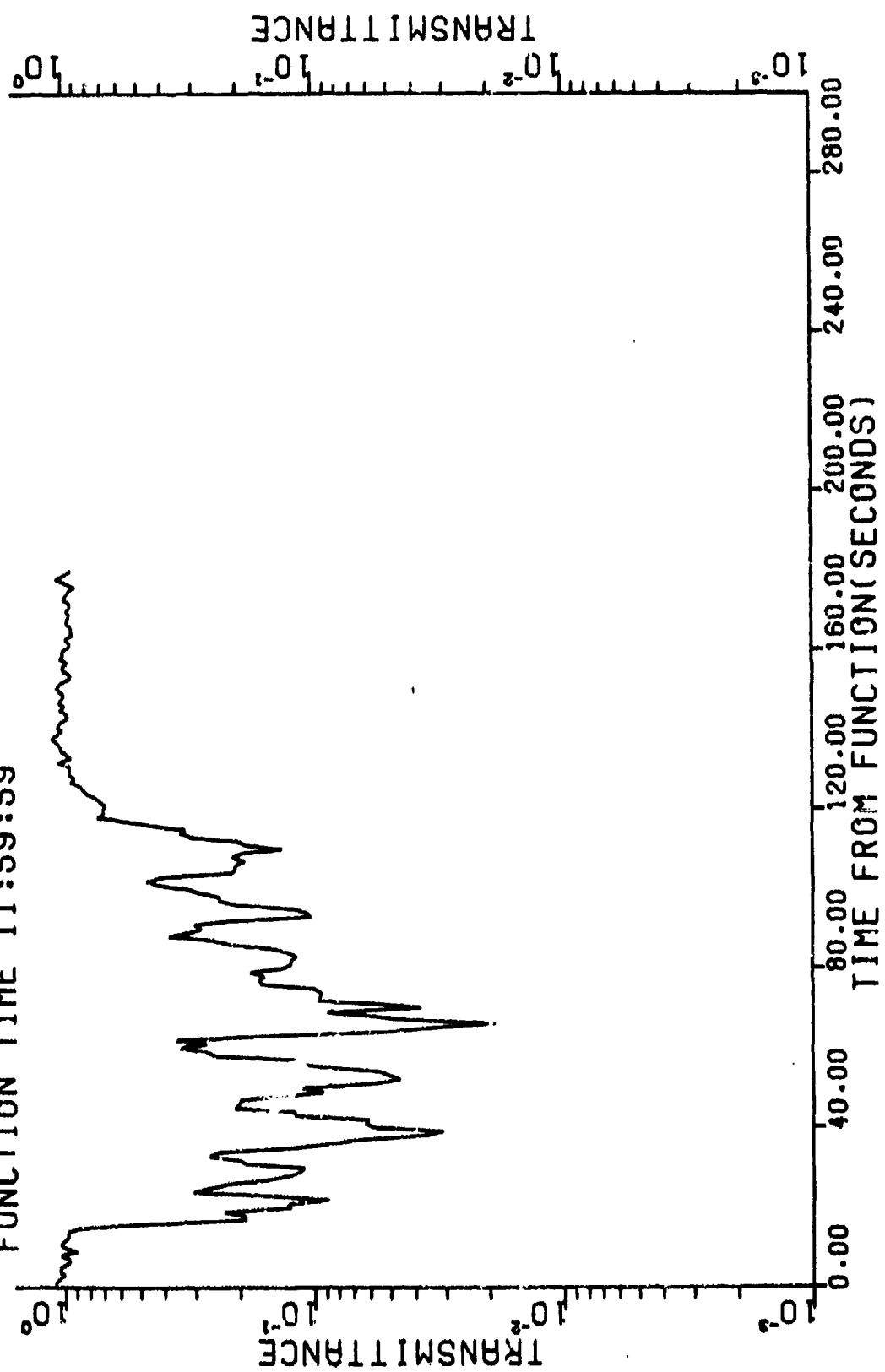
KEY  
 □ - 0.0000 05-1.3 MICRONS  
 ○ - 0.0000 1.3-1.3 MICRONS  
 △ - 0.0000 1.3-1.3 MICRONS  
 × - 0.0000 1.3-1.3 MICRONS  
 ◆ - 0.0000 1.3-1.3 MICRONS



PROPORTION OF PARTICLES IN VARIOUS RANGES AS A FUNCTION OF TIME BASED ON NUMBER

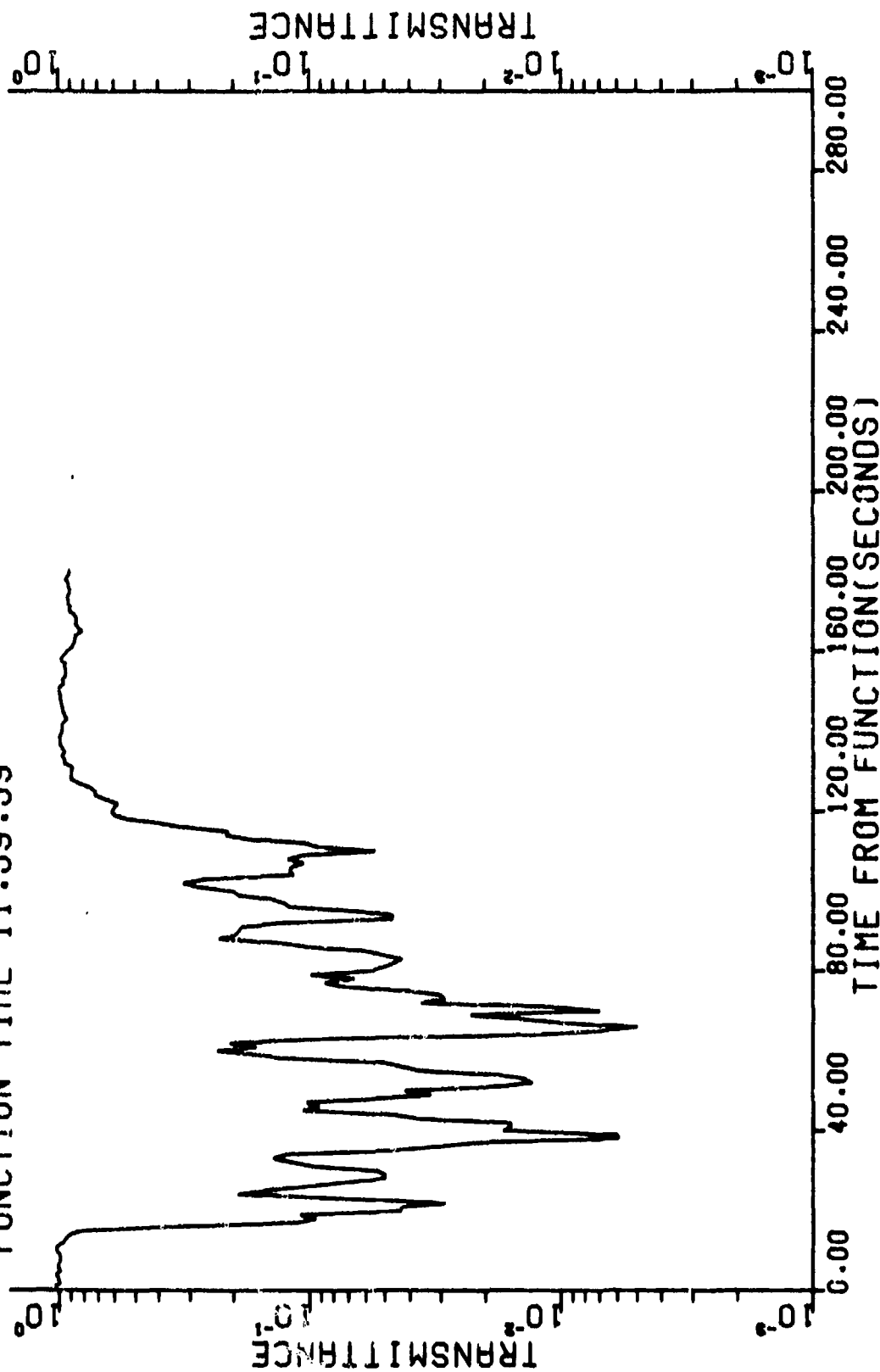


TRIAL #03 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:59:59



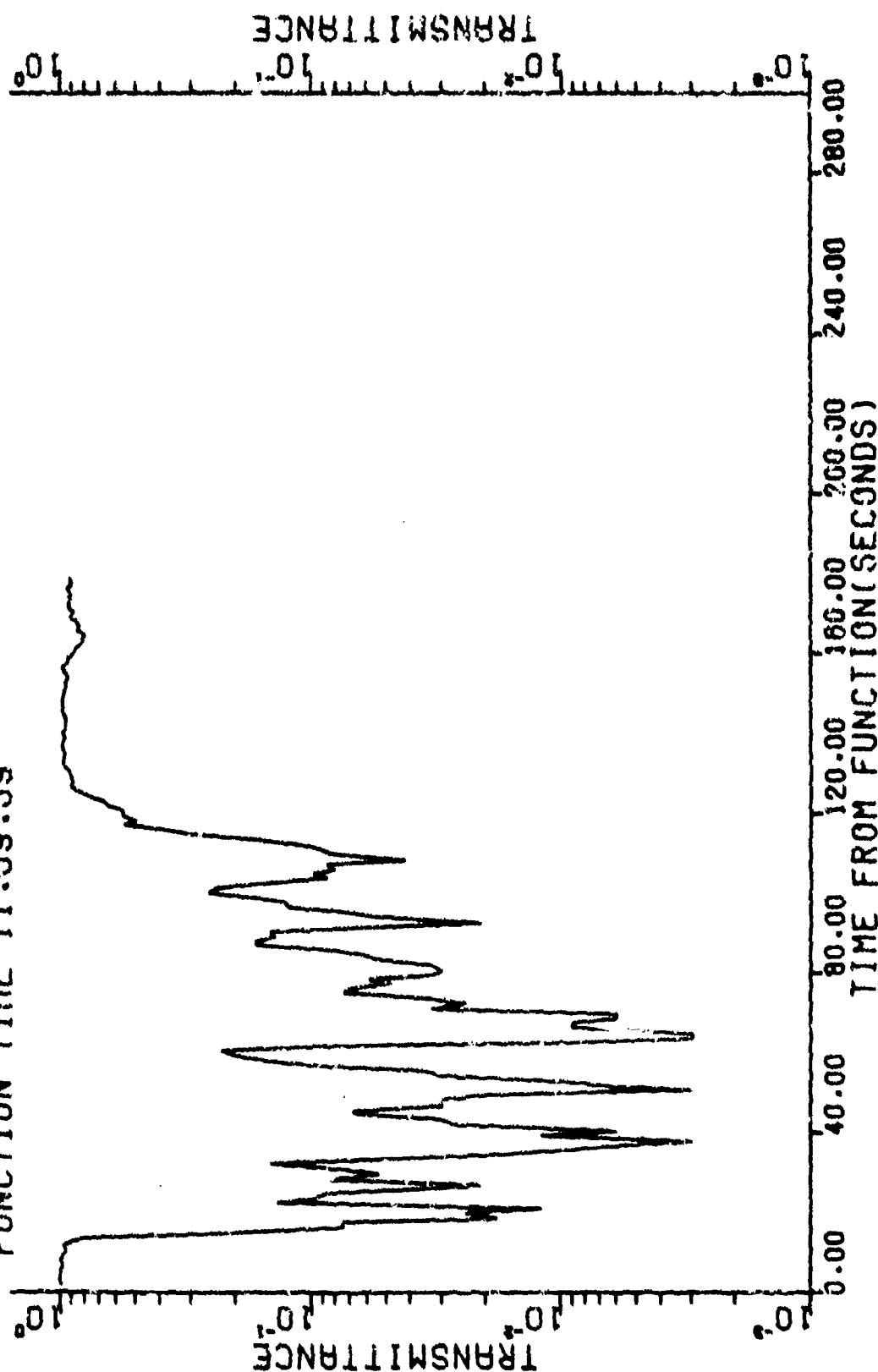
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ m LOCATED ON CENTER ROW

TRIAL #03 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:59:59



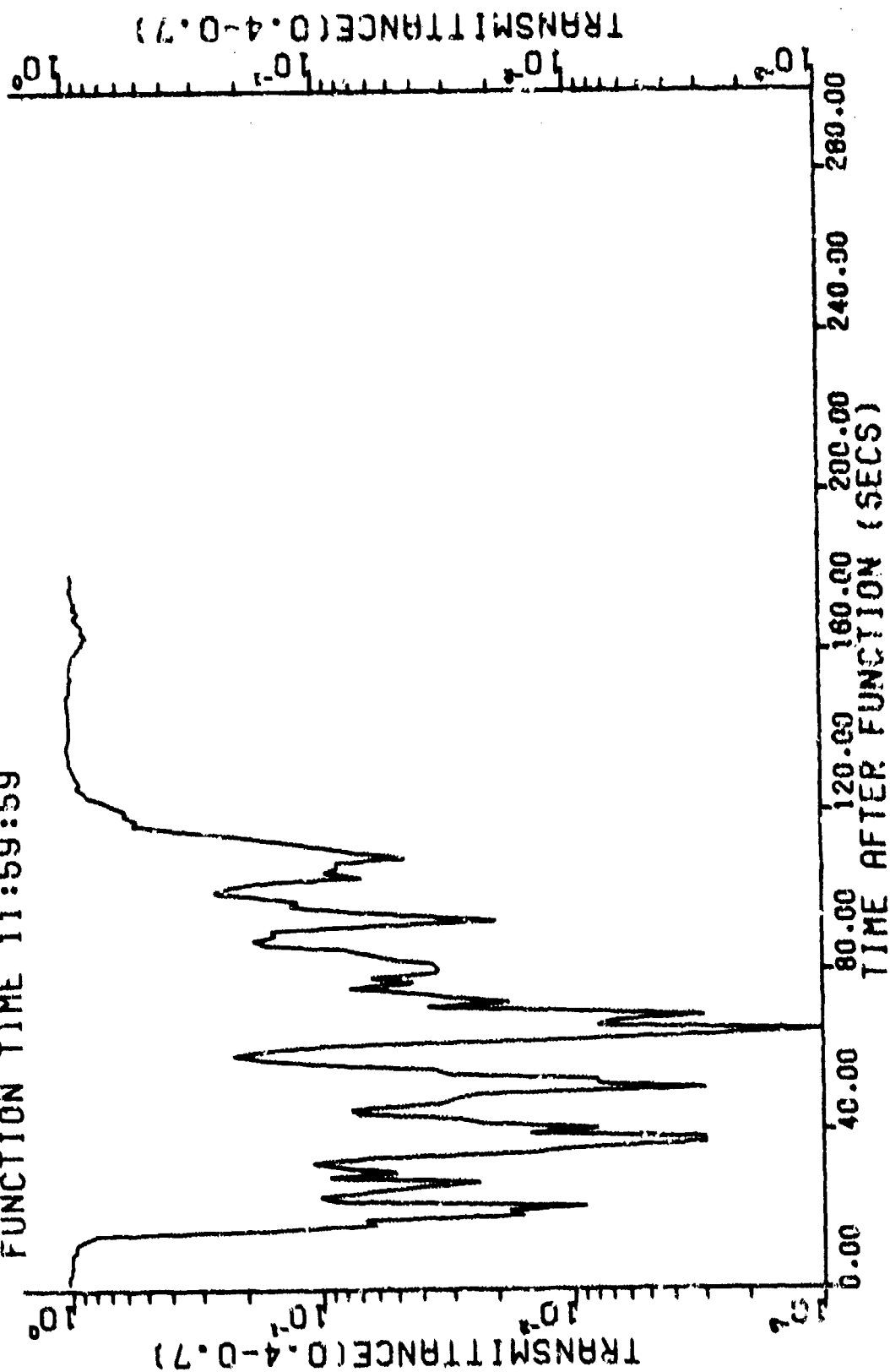
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED 01 CENTER ROW

TRIAL #03 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:59:59



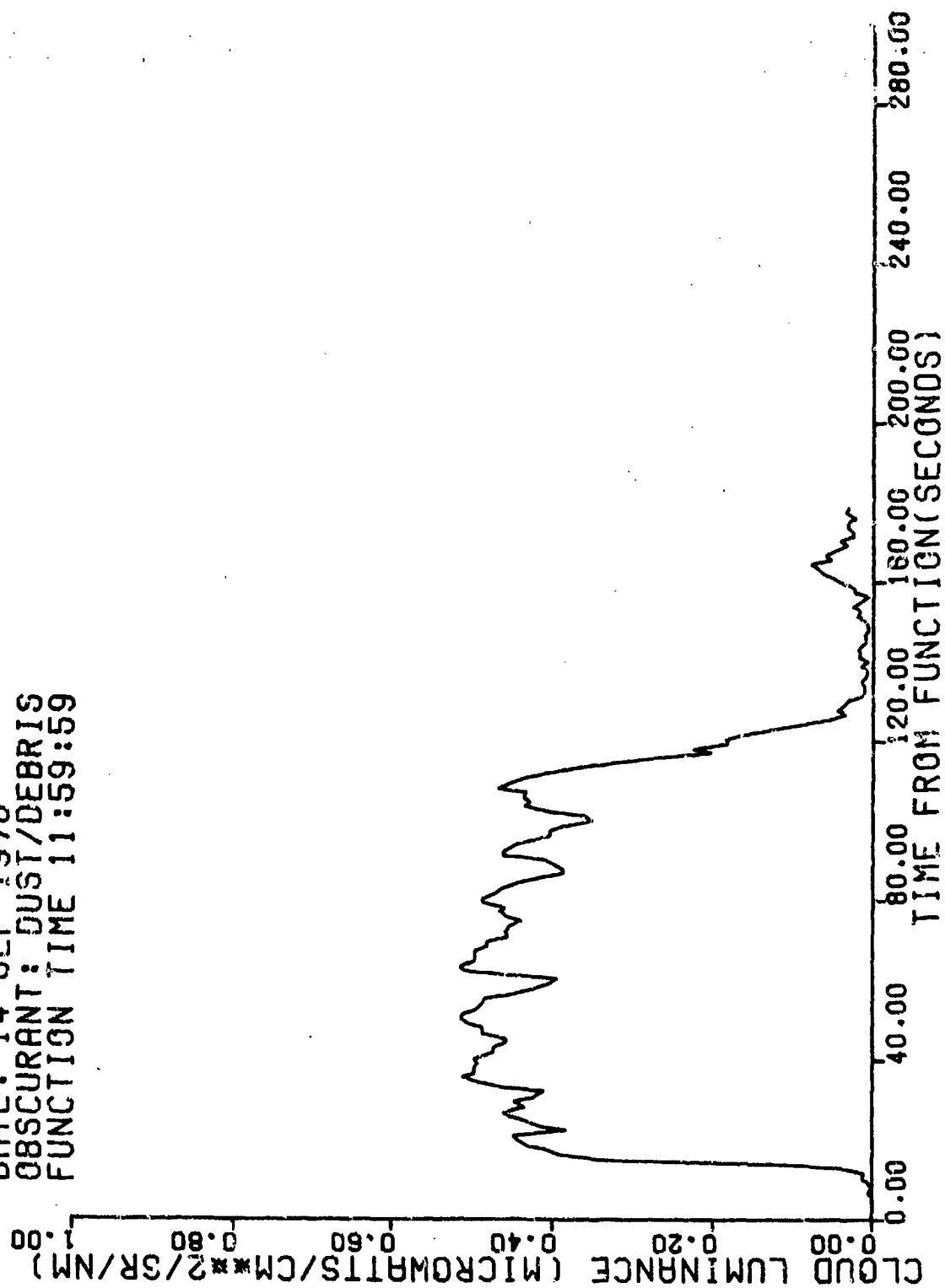
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ m LOCATED ON CENTER ROW

TRIAL D3: DPG DUST ADDON  
 DATE: 14 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 11:59:59



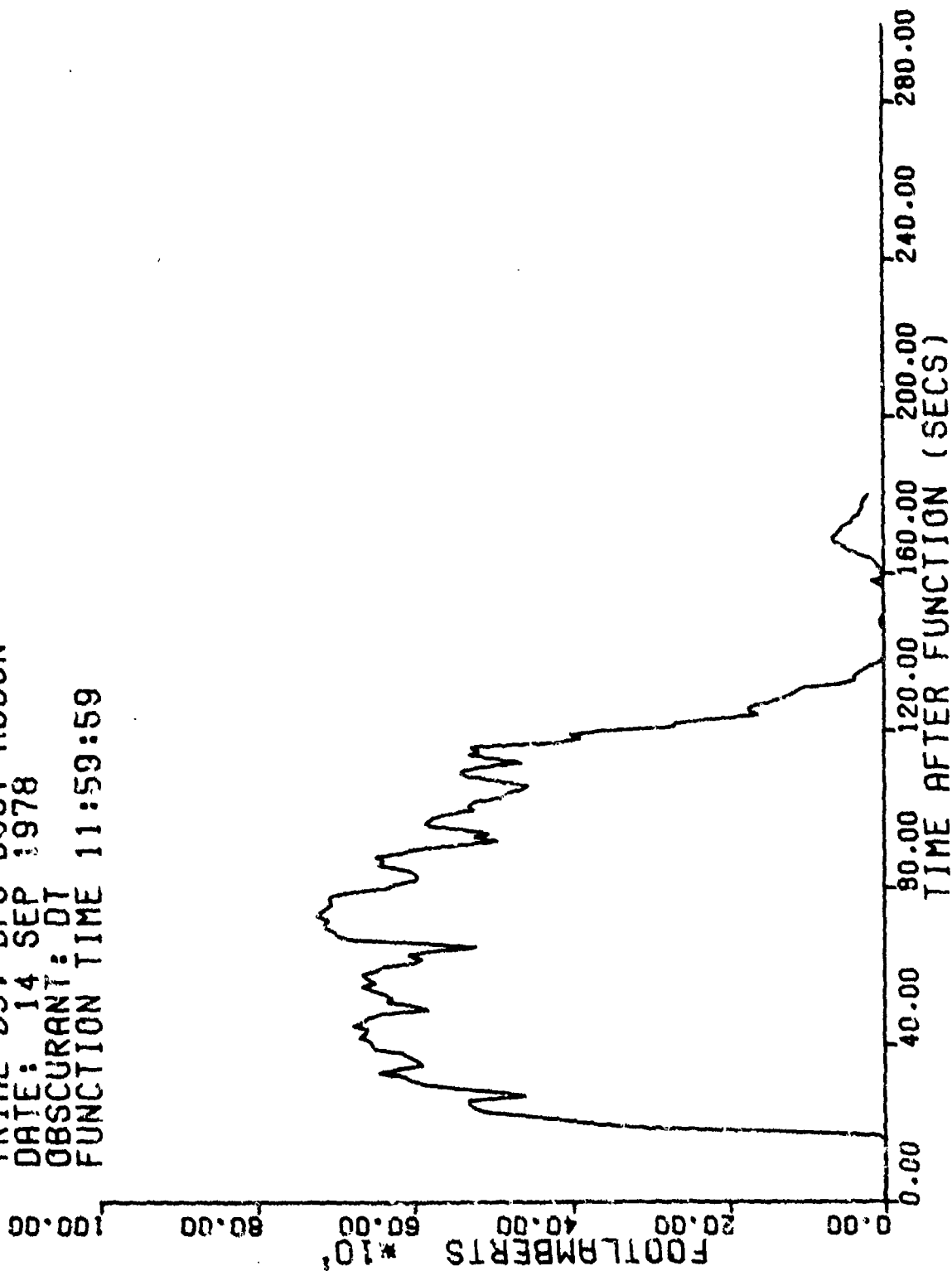
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
 0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #03 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 11:59:59



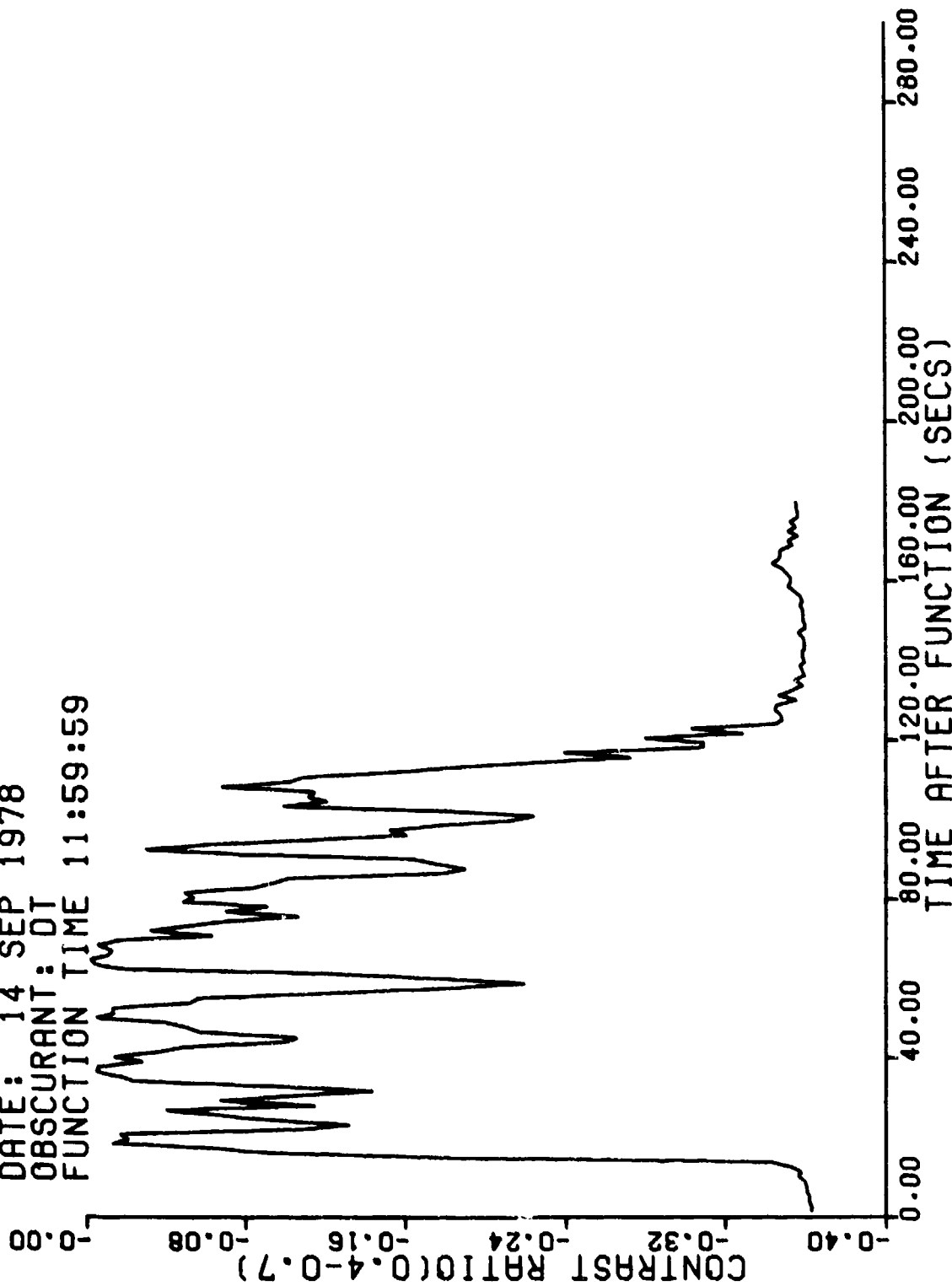
CLOUD LUMINANCE VERSUS TIME FOR  
WAVELENGTH 1.060 $\mu$ M LOCATED ON CENTER ROW

TRIAL D3: DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 11:59:59



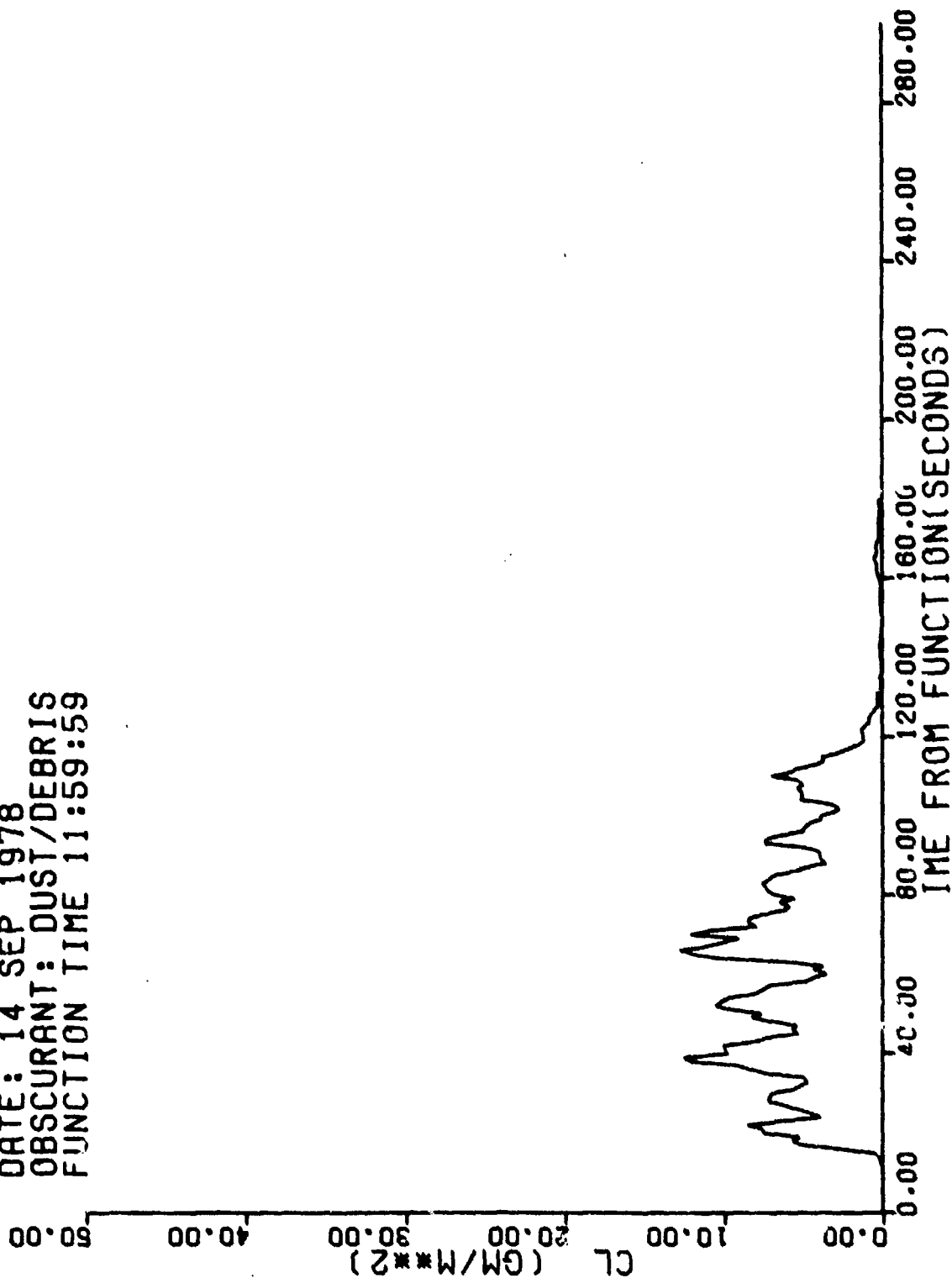
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEA 'RED ALONG CENTER ROW

TRIAL D3, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 11:59:59



CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #D3 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 11:59:59



CL VALUES VERSUS TIME FOR CENTER ROW  
 CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT



APPENDIX B, SECTION 9

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TRIAL D4, DPG DUST ADD-ON, 14 September 1978

PAGE	
B-9-2	TABLE: TEST DAY DATA
No Data	FIGURE: DOSAGE ALONG SAMPLING LINE
B-9-3	FIGURE: AVERAGE NMD VERSUS TIME
B-9-4	FIGURE: PARTICLE SIZE DISTRIBUTION
B-9-5	FIGURE: PROPORTION OF PARTICLES VERSUS TIME
B-9-6	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 9.75 $\mu\text{m}$
B-9-7	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 3.443 $\mu\text{m}$
B-9-8	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-9-9	FIGURE: TRANSMITTANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-9-10	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 1.06 $\mu\text{m}$
B-9-11	FIGURE: CLOUD LUMINANCE VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-9-12	FIGURE: CONTRAST RATIO VERSUS TIME FOR WAVELENGTH 0.4-0.7 $\mu\text{m}$
B-9-13	FIGURE: CL VALUES VERSUS TIME

IDENTIFICATION:

Trial Number: D4 (DP1-005)

Date of Trial 14 Sept 78

Function Time: 12:20:57

Particle Size Range

Proportion %

0.65 - 1.0	11
1.3 - 2.3	16
2.3 - 10.0	72
10.0 - 15.0	0
15.0 - 20.0	1
> - 20.0	0

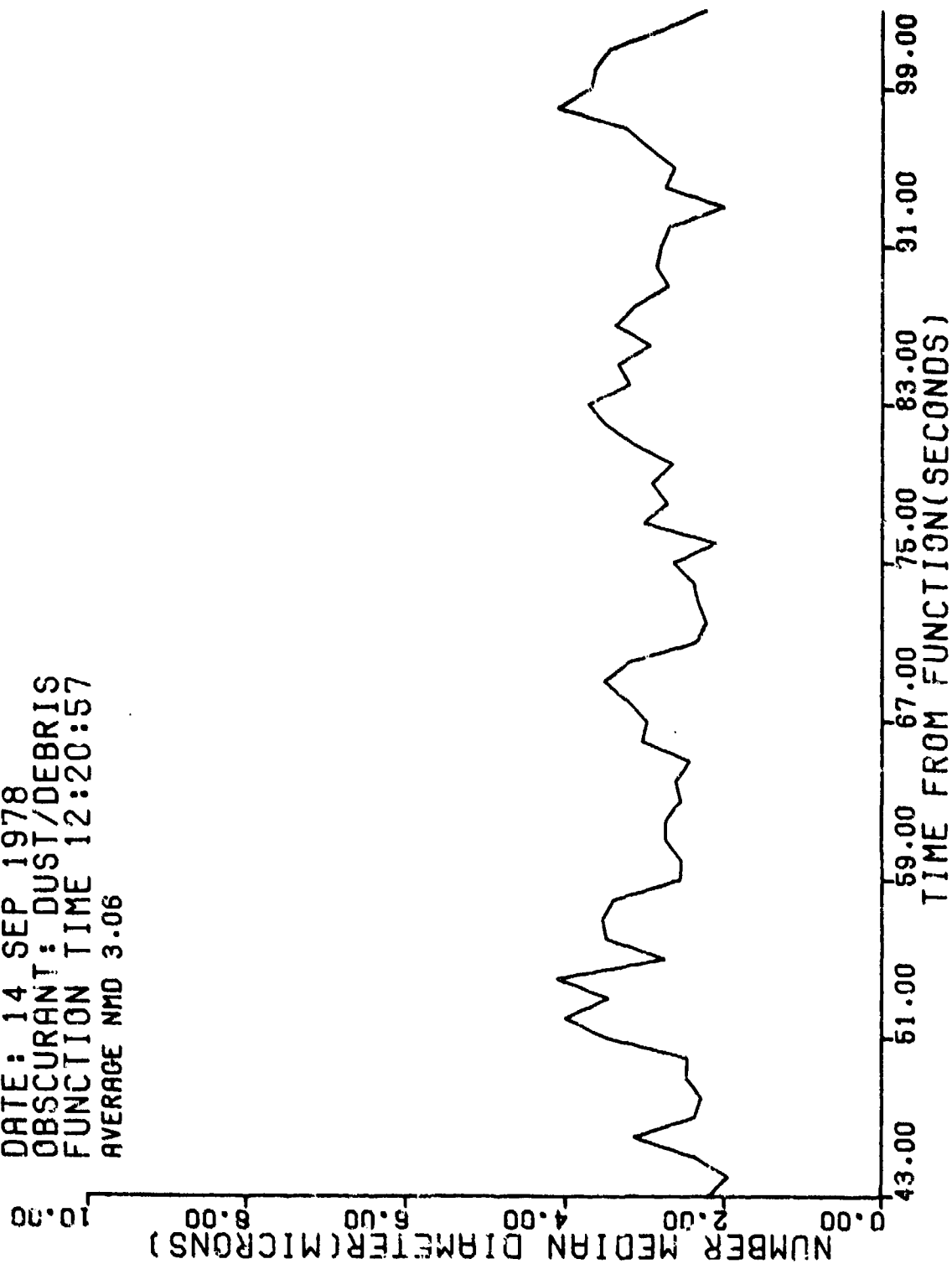
Log<sub>10</sub> NMD 0.485

Log<sub>10</sub> NMD 0.267

NMD (μm) 3.06

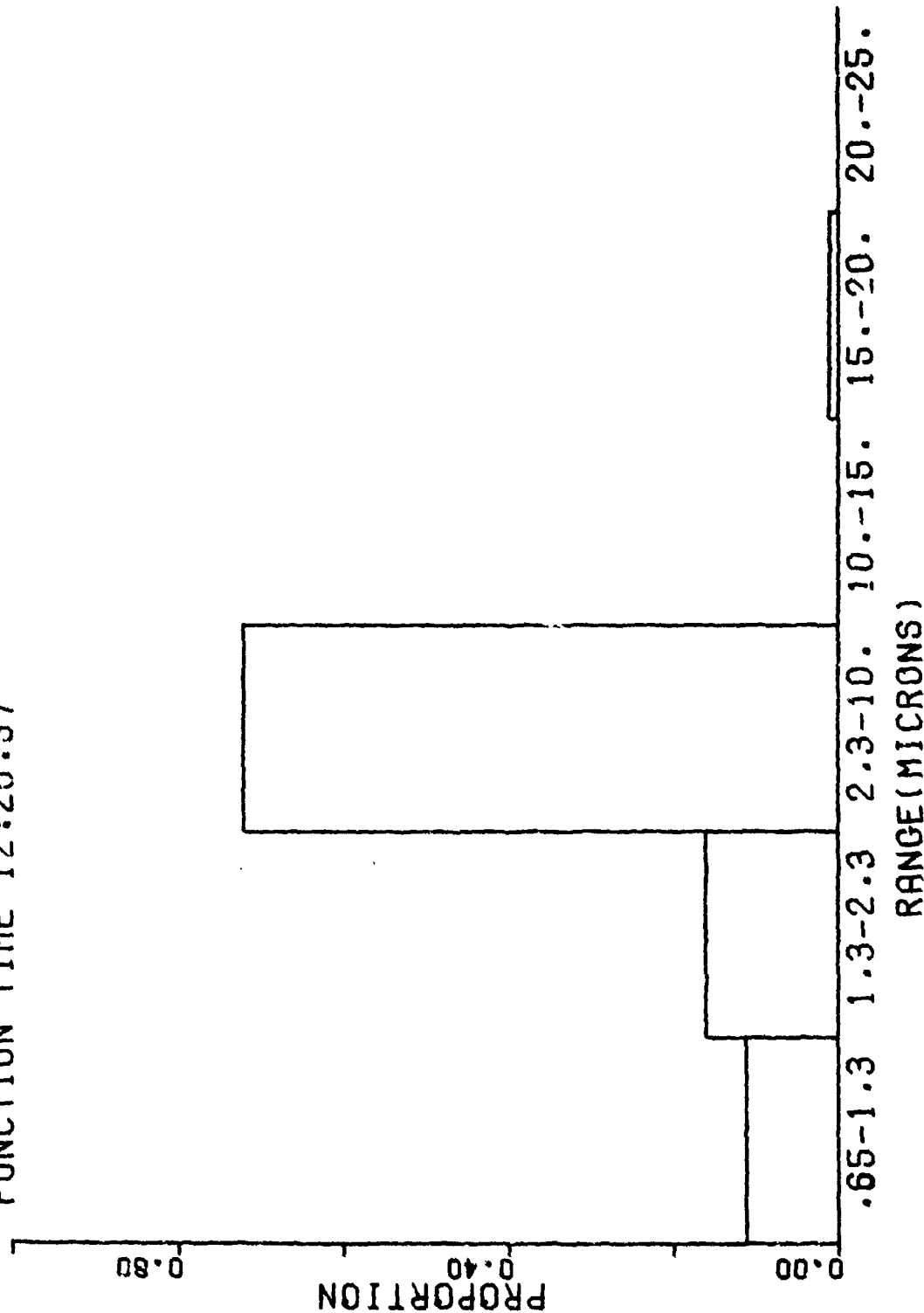
PSA #2

TRIAL #D4 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 12:20:57  
AVERAGE NMD 3.06



AVERAGE NMD AS A FUNCTION OF TIME

TRIAL #D4 (DP1-005) PSA #2  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 12:20:57

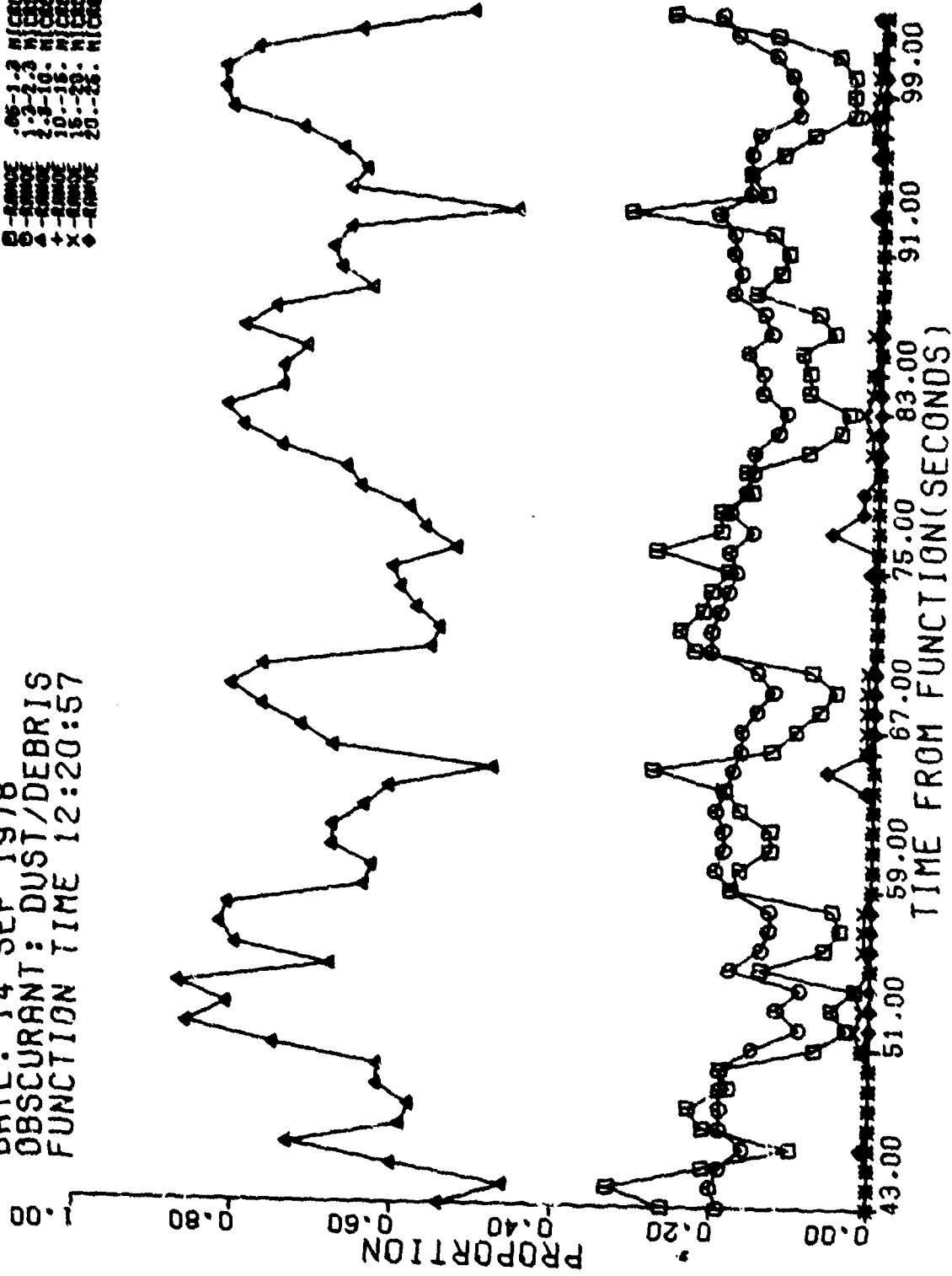


PARTICLE SIZE DISTRIBUTION BASED ON NUMBER

TRIAL #D4 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 12:20:57

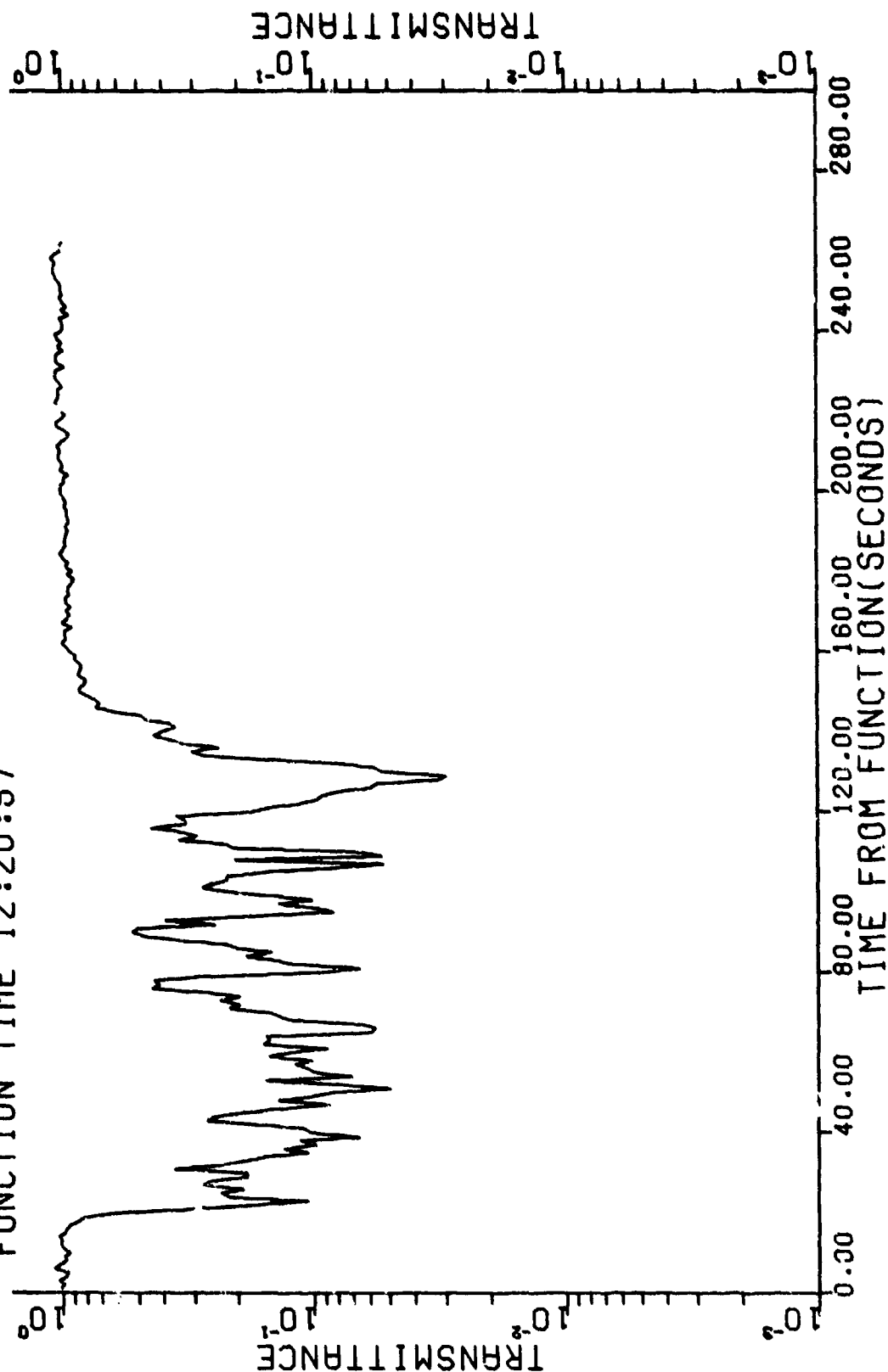
PSA #2

KEY  
 □ - RANGE 06-1-3 N CHANGES  
 △ - RANGE 1-3-2-3 N CHANGES  
 + - RANGE 3-10-10-18-18-20-26 N CHANGES  
 × - RANGE 18-20-26 N CHANGES



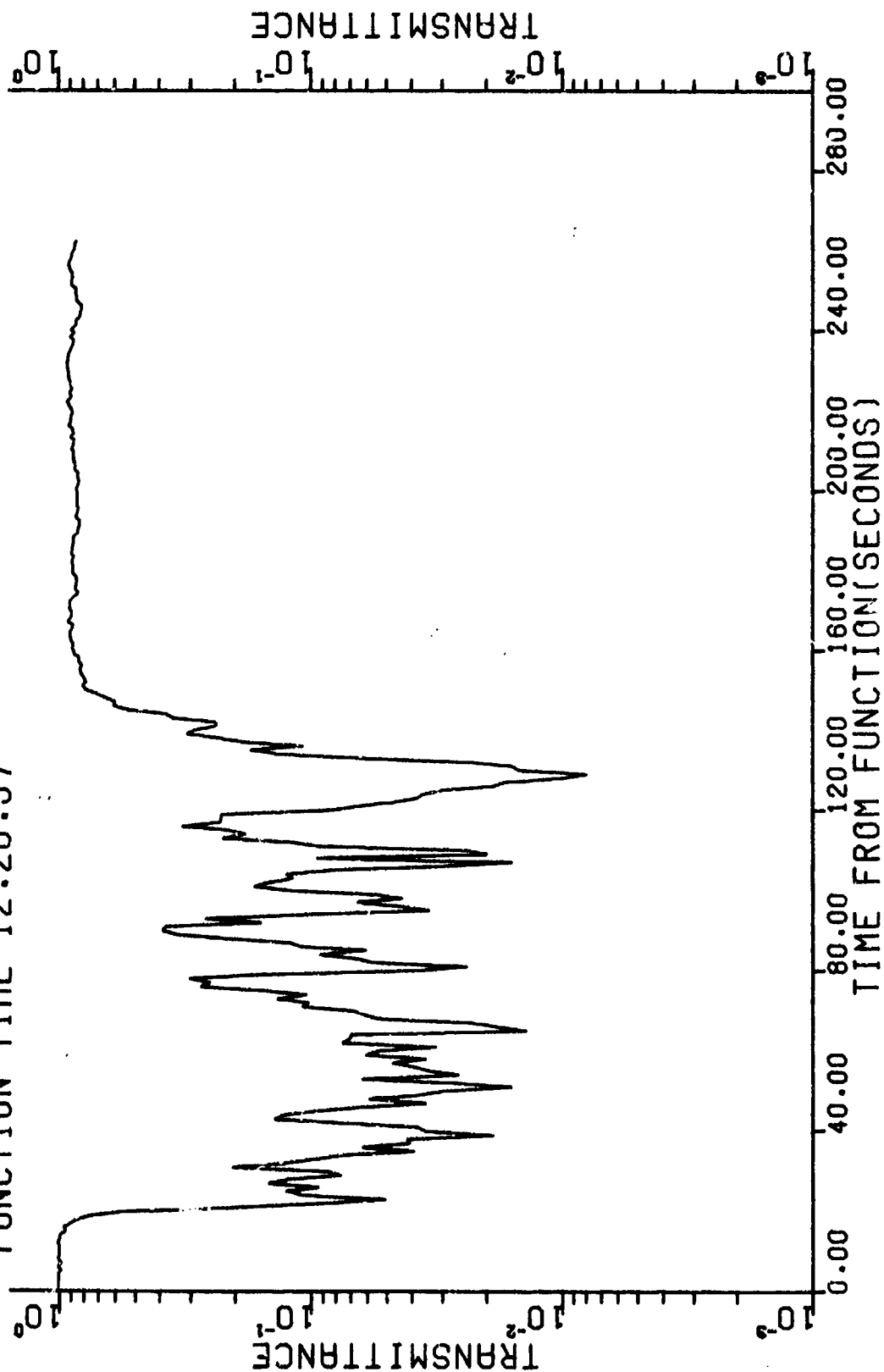
PROPORTION OF PARTICLES IN VARIOUS RANGES AS A FUNCTION OF TIME BASED ON NUMBER

TRIAL #D4 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 12:20:57



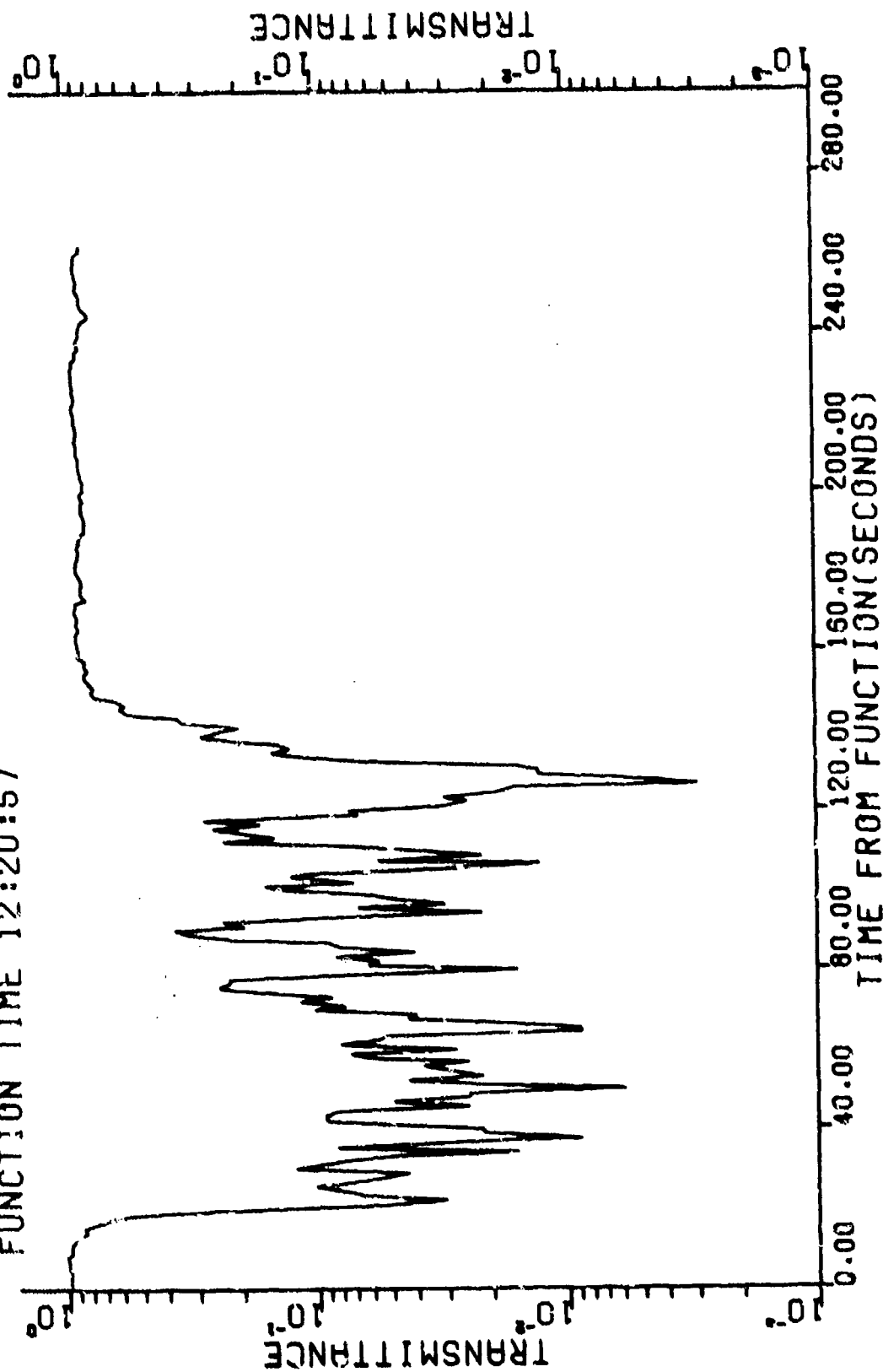
TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 9.750 $\mu$ M LOCATED CENTER ROW

TRIAL #04 (021-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 12:20:57



TRANSMITTANCE VERSUS TIME FOR  
WAVELENGTH 3.443 $\mu$ m LOCATED ON CENTER ROW

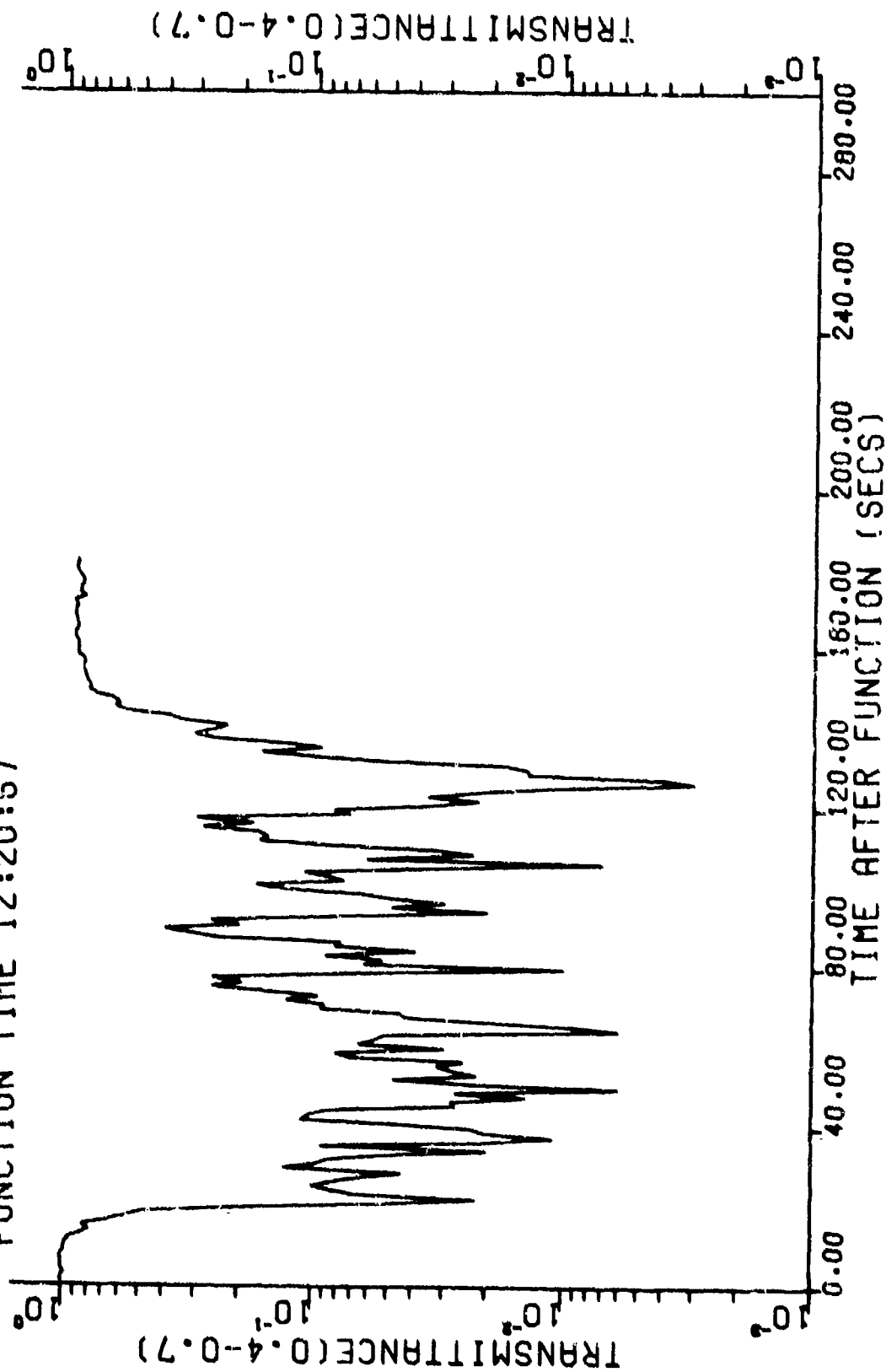
TRIAL #D4 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 12:20:57



TRANSMITTANCE VERSUS TIME FOR  
 WAVELENGTH 1.060  $\mu$ m L'ATED ON CENTER ROW

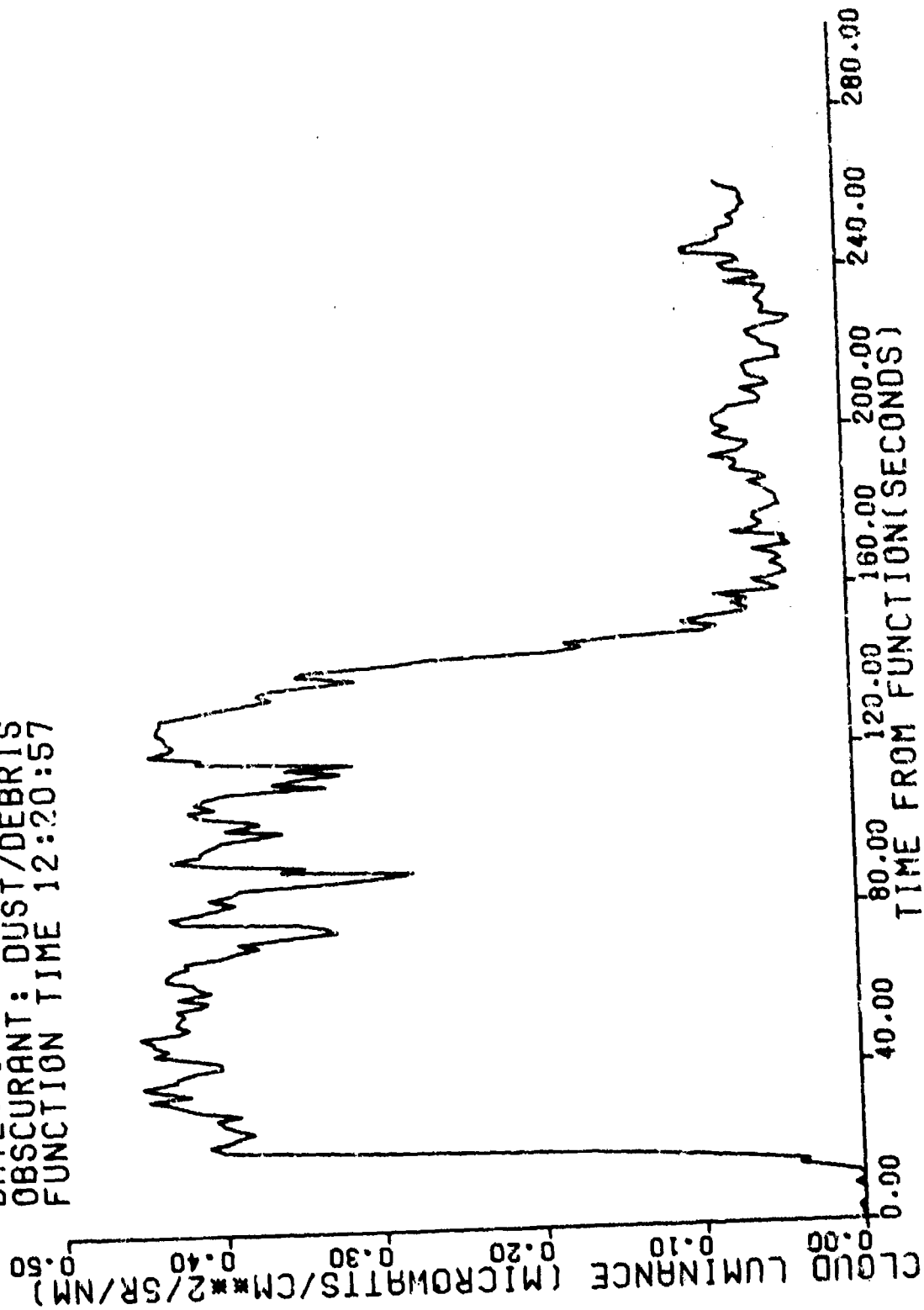


TRIAL D4: DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 12:20:57



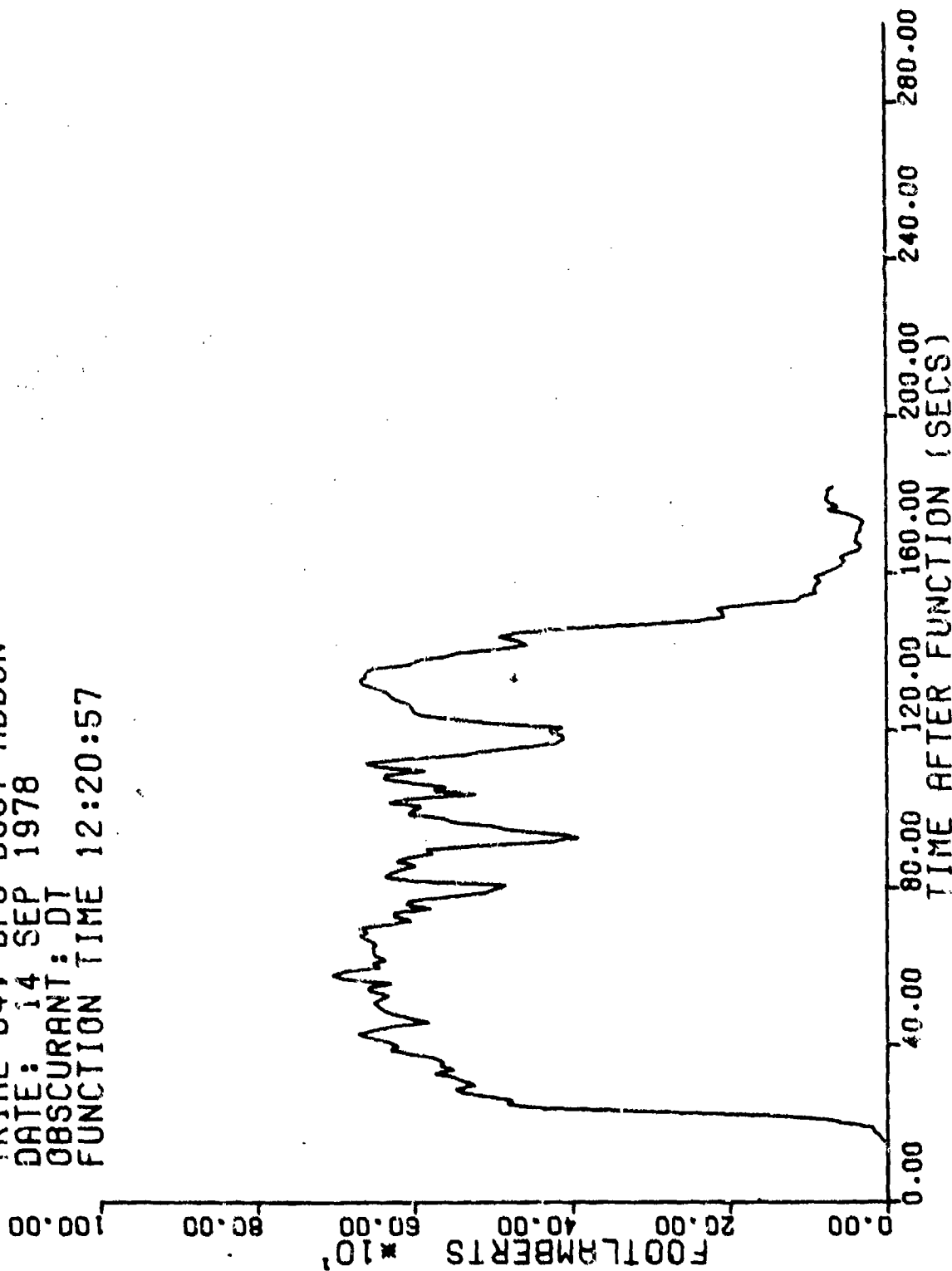
TRANSMITTANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #D4 (DP1-005)  
 DATE: 14 SEP 1978  
 OBSCURANT: DUST/DEBRIS  
 FUNCTION TIME 12:20:57



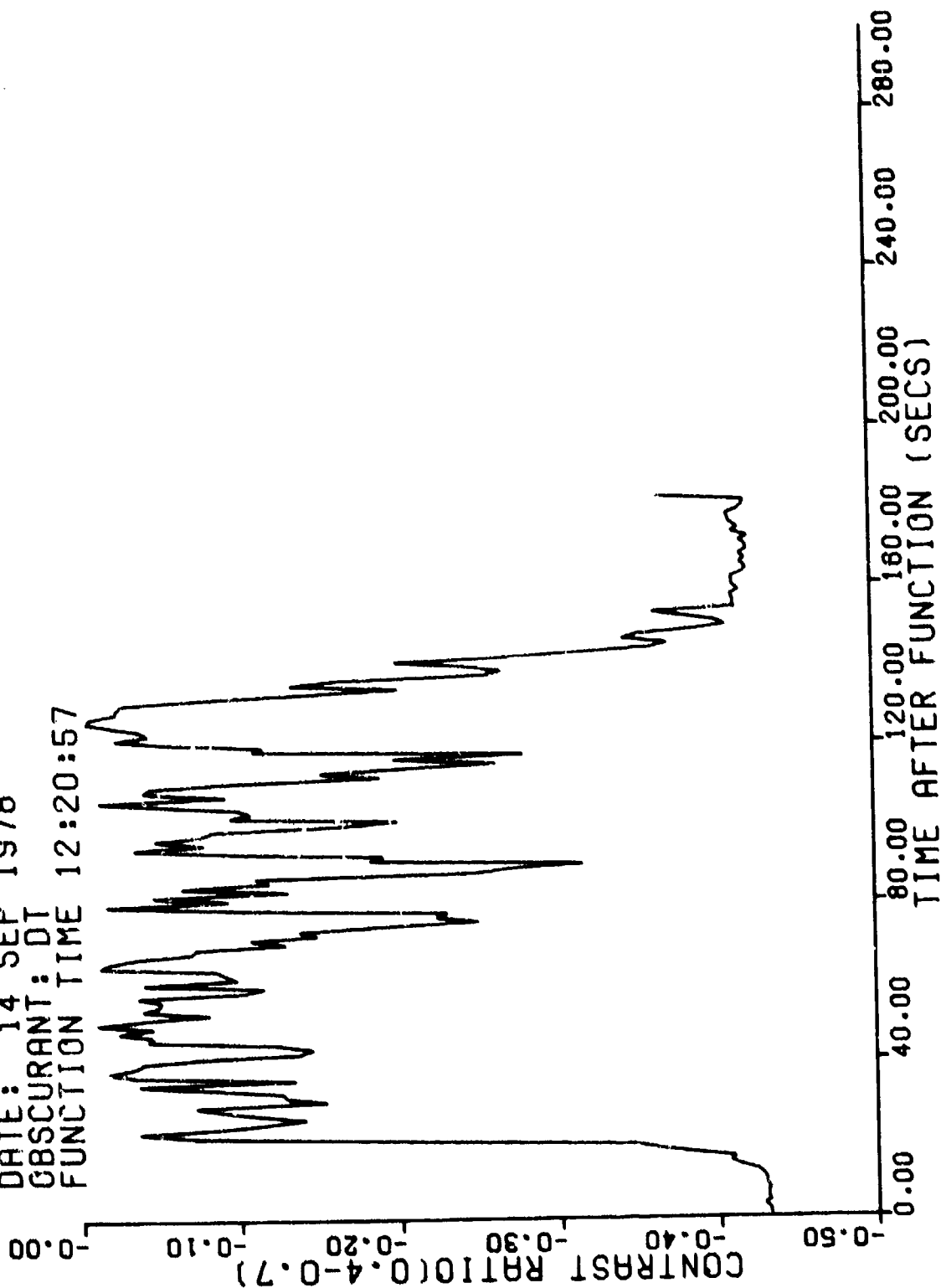
CLOUD LUMINANCE VERSUS TIME FOR  
 WAVELENGTH 1.060 $\mu$ m L'ATED ON CENTER ROW

TRIAL 04; DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 12:20:57



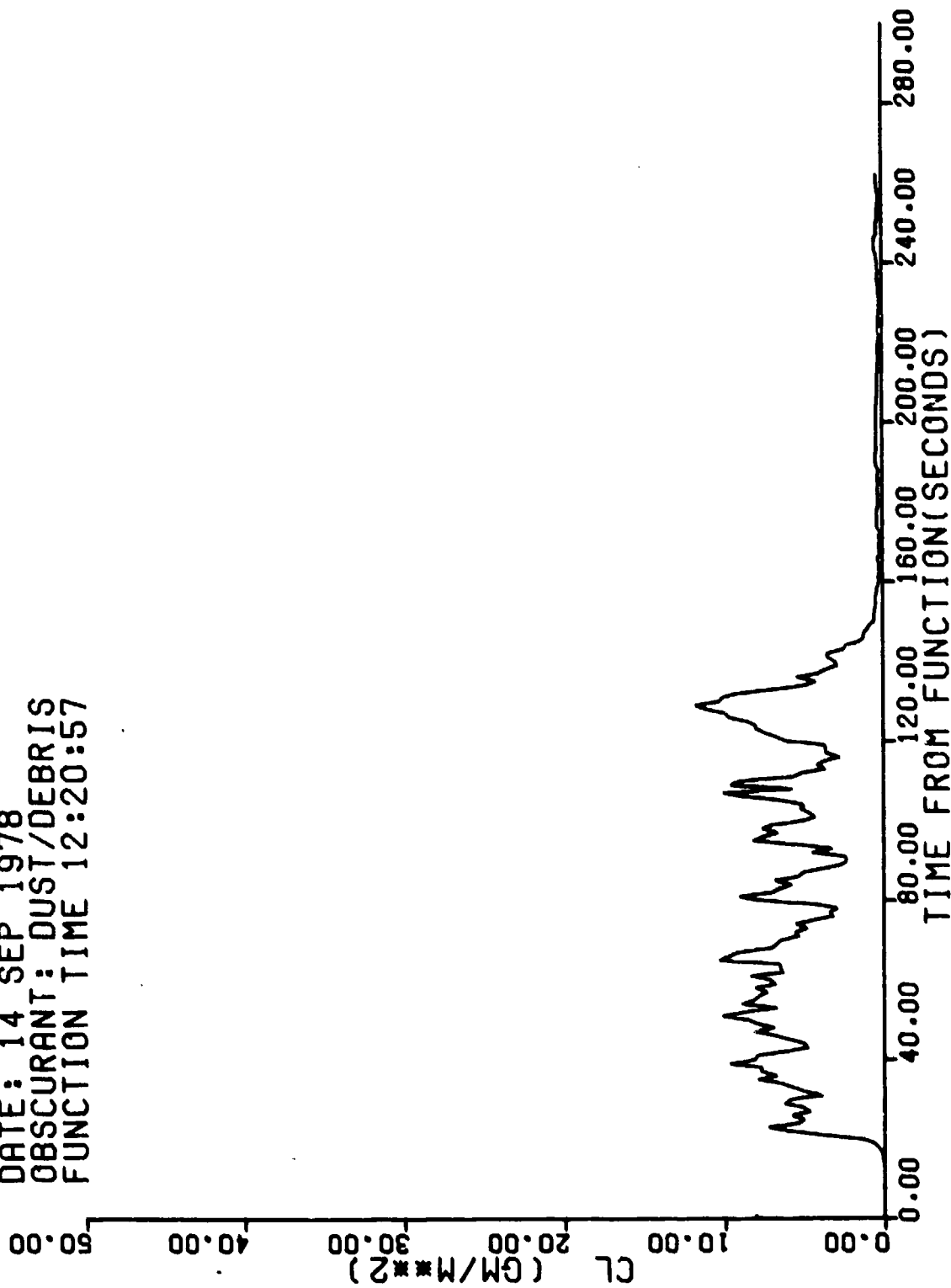
CLOUD LUMINANCE VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL 04, DPG JUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 12:20:57



CONTRAST RATIO VS TIME FOR WAVE LENGTH BETWEEN  
0.4 AND 0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL #D4 (DP1-005)  
DATE: 14 SEP 1978  
OBSCURANT: DUST/DEBRIS  
FUNCTION TIME 12:20:57



CL VALUES VERSUS TIME FOR CENTER ROW  
CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

APPENDIX B, SECTION 10

METEOROLOGICAL DATA

<u>TRIAL</u>	<u>PAGE</u>
C1	B-10-2
C2	B-10-3
E1	B-10-4
E2	B-10-5
E3	B-10-6
D1	B-10-7
D2	B-10-8
D3	B-10-9
D4	B-10-10

**Meteorological Data**

**Trial Number: C1 (DP1-005)**

**Date of Trial: 28 Sep 78**

**Function Time: 1413:02**

Average Wind Direction (degrees, 2 m) . . . . .	129
Average Wind Speed (m/sec, 2 m) . . . . .	1.1
Temperature (degrees C, 1 m) . . . . .	29.8
Relative Humidity (percent, 1 m) . . . . .	20
Pasquill Stability Parameter . . . . .	B
Opaque Cloud Cover (percent)*. . . . .	100

**\*High cirro-stratus clouds**

Meteorological Data

Trial Number: C2 (DP1-005)

Date of Trial: 29 Sep 78

Function Time: 1445:30

Average Wind Direction (degrees, 2 m) . . . . .	011
Average Wind Speed (m/sec, 2 m) . . . . .	2.0
Temperature (degrees C, 1 m) . . . . .	26.1
Relative Humidity (percent, 1 m) . . . . .	25
Pasquill Stability Parameter . . . . .	B
Opaque Cloud Cover (percent) . . . . .	0



**Meteorological Data**

**Trial Number: E1 (DP1-005)**

**Date of Trial: 25 Sep 78**

**Function Time: 1355:10**

Average Wind Direction (degrees, 2 m) . . . . .	327
Average Wind Speed (m/sec, 2 m) . . . . .	2.7
Temperature (degrees C, 1 m) . . . . .	24.3
Relative Humidity (percent, 1 m) . . . . .	24
Pasquill Stability Parameter . . . . .	C
Opaque Cloud Cover (percent) . . . . .	10

Meteorological Data

Trial Number: E2 (DP1-005)

Date of Trial: 27 Sep 78

Function Time: 1301:20

Average Wind Direction (degrees, 2 m) . . . . .	153
Average Wind Speed (m/sec, 2 m) . . . . .	3.2
Temperature (degrees C, 1 m) . . . . .	28.9
Relative Humidity (percent, 1 m) . . . . .	18
Pasquill Stability Parameter . . . . .	C
Opaque Cloud Cover (percent) . . . . .	20

Meteorological Data

Trial Number: E3 (DP1-005)

Date of Trial: 29 Sep 78

Function Time: 1326:01

Average Wind Direction (degrees, 2 m) . . . . .	002
Average Wind Speed (m/sec, 2 m) . . . . .	1.6
Temperature (degrees C, 1 m) . . . . .	24.2
Relative Humidity (percent, 1 m) . . . . .	27
Pasquill Stability Parameter . . . . .	8
Opaque Cloud Cover (percent) . . . . .	0

Meteorological Data

Trial Number: D1 (DP1-005)

Date of Trial: 14 Sep 78

Function Time: 1102:59

Average Wind Direction (degrees, 2 m) . . . . .	185
Average Wind Speed (m/sec, 2 m) . . . . .	5.0
Temperature (degrees C, 1 m) . . . . .	17.7
Relative Humidity (percent, 1 m) . . . . .	42
Pasquill Stability Parameter . . . . .	D
Opaque Cloud Cover (percent) . . . . .	90

Meteorological Data

Trial Number: D2 (DP1-005)

Date of Trial: 14 Sep 78

Function Time: 1123:59

Average Wind Direction (degrees, 2 m) . . . . .	192
Average Wind Speed (m/sec, 2 m) . . . . .	4.6
Temperature (degrees C, 1 m) . . . . .	17.2
Relative Humidity (percent, 1 m) . . . . .	43
Pasquill Stability Parameter . . . . .	D
Opaque Cloud Cover (percent) . . . . .	90

**Meteorological Data**

**Trial Number: D3 (DP1-005)**

**Date of Trial: 14 Sep 78**

**Function Time: 1159:59**

Average Wind Direction (degrees, 2 m) . . . . .	197
Average Wind Speed (m/sec, 2 m) . . . . .	7.1
Temperature (degrees C, 1 m) . . . . .	16.7
Relative Humidity (percent, 1 m) . . . . .	45
Pasquill Stability Parameter . . . . .	D
Opaque Cloud Cover (percent) . . . . .	100

**Meteorological Data**

**Trial Number: D4 (DPI-005)**

**Date of Trial: 14 Sep 78**

**Function Time: 1220:57**

Average Wind Direction (degrees, 2 m) . . . . .	185
Average Wind Speed (m/sec, 2 m) . . . . .	7.1
Temperature (degrees C, 1 m) . . . . .	15.6
Relative Humidity (percent, 1 m) . . . . .	54
Pasquill Stability Parameter . . . . .	C
Opaque Cloud Cover (percent) . . . . .	100

APPENDIX B, SECTION 11

CLOUD DIMENSION DATA

<u>TRIAL</u>	<u>PAGE</u>
C1	B-11-2
C2	B-11-3
E1	B-11-4
E2	B-11-5
E3	B-11-6
D1	B-11-7
D2	B-11-8
D3	B-11-9
D4	B-11-10



Trial Number: C1 (DP1-005)  
Date of Trial: 28 Sep 78  
Function Time: 14:13:02

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
14:13:05	21	15	3
14:13:06	23	15	3
14:13:07	28	17	4
14:13:08	29	18	4
14:13:09	30	23	4
14:13:10	34	24	5
14:13:11	38	27	5
14:13:12	40	27	5
14:13:13	40	29	5
14:13:14	41	30	5
14:13:15	42	31	6
14:13:16	42	31	6
14:13:17	42	32	6
14:13:18	43	33	7
14:13:19	43	32	7
14:13:20	44	30	6
14:13:21	40	27	8
14:13:22	39	26	9
14:13:23	36	26	9
14:13:24	36	26	9
14:13:25	35	26	10
14:13:26	32	26	10
14:13:27	30	26	10
14:13:28	26	24	9
14:13:29	28	21	8
14:13:30	27	19	8
14:13:31	25	18	7
14:13:32	23	12	5

NOTE: The gun was located approximately 60 m south of sampling position 8.  
See Figure 1, page 8.

Trial Number: C2 (DP1-005)  
Date of Trial: 29 Sep 78  
Function Time: 14:45:30

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
14:45:31	12	16	3
14:45:32	17	18	5
14:45:33	17	20	7
14:45:34	26	24	9
14:45:35	28	25	9
14:45:36	39	27	10
14:45:37	41	27	10
14:45:38	46	29	10
14:45:39	47	37	10
14:45:40	49	38	10
14:45:41	51	39	10
14:45:42	52	39	10
14:45:43	52	39	11
14:45:44	54	39	11
14:45:45	56	39	11
14:45:46	57	41	11
14:45:47	54	42	10
14:45:48	51	44	9
14:45:49	47	44	9
14:45:50	47	45	9
14:45:51	41	46	8
14:45:52	41	50	8
14:45:53	39	50	8
14:45:54	38	50	8
14:45:55	36	49	7
14:45:56	34	45	7
14:45:57	34	42	7
14:45:58	32	42	6
14:45:59	32	42	4
14:46:00	30	42	4

NOTE: The gun was located approximately 25 m north of sampling position 8.  
See Figure 1, page 8.

Trial Number: E1 (DP1-005)  
Date of Trial: 25 Sep 78  
Function Time: 13:55:10

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
13:55:11	133	152	3
13:55:12	173	155	6
13:55:13	178	156	7
13:55:14	178	159	7
13:55:15	178	160	7
13:55:16	185	161	7
13:55:17	207	161	8
13:55:18	208	162	10
13:55:19	213	163	10
13:55:20	220	163	10
13:55:21	184	163	12
13:55:22	176	165	12
13:55:23	177	165	14
13:55:24	182	166	17
13:55:25	186	167	17
13:55:26	186	169	18
13:55:27	190	169	18
13:55:28	195	170	20
13:55:29	196	170	20
13:55:30	197	168	20
13:55:31	200	168	20
13:55:32	201	168	20
13:55:33	201	168	20
13:55:34	211	168	20
13:55:35	223	168	20
13:55:36	N.D.*	168	20
13:55:37	N.D.	168	20
13:55:38	N.D.	160	19
13:55:39	N.D.	149	17
13:55:40	N.D.	142	17
13:55:50	N.D.	141	21

\*N.D. = No Data

NOTE: For source locations see Figure B-3-12

Trial Number: E2 (DP1-005)  
Date of Trial: 27 Sep 79  
Function Time: 13:01:20

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
13:01:22	104	89	5
13:01:23	104	92	5
13:01:24	106	95	6
13:01:25	106	96	6
13:01:26	109	97	8
13:01:27	110	99	8
13:01:28	111	100	9
13:01:29	111	102	9
13:01:30	114	102	9
13:01:31	119	103	10
13:01:32	120	105	10
13:01:33	123	106	10
13:01:34	125	107	11
13:01:35	128	108	12
13:01:36	129	109	12
13:01:37	131	109	12
13:01:38	131	111	12
13:01:39	134	113	12
13:01:40	136	114	13
13:01:41	137	116	14
13:01:42	137	117	15
13:01:43	138	120	15
13:01:44	139	120	16
13:01:45	140	121	16
13:01:46	138	122	17
13:01:47	138	123	17
13:01:48	137	123	17
13:01:49	137	124	18
13:01:50	125	124	18
13:02:00	117	143	21

NOTE: For source locations see Figure B-4-12

Trial Number: E3 (DPI-005)  
Date of Trial: 29 Sep 78  
Function Time: 13:26:01

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
13:26:02	92	127	4
13:26:03	167	128	5
13:26:04	169	144	4
13:26:05	170	155	6
13:26:06	170	158	7
13:26:07	171	163	7
13:26:08	174	164	9
13:26:09	176	164	10
13:26:10	177	165	11
13:26:11	178	167	11
13:26:12	180	167	12
13:26:13	180	169	15
13:26:14	182	172	15
13:26:15	184	175	16
13:26:16	186	176	17
13:26:17	187	180	18
13:26:18	189	181	20
13:26:19	191	183	21
13:26:20	192	184	23
13:26:21	192	185	24
13:26:22	193	187	24
13:26:23	193	189	25
13:26:24	193	193	26
13:26:25	193	196	27
13:26:26	194	198	31
13:26:27	195	200	32
13:26:28	196	201	33
13:26:29	196	204	34
13:26:30	196	206	36
13:26:31	196	208	37
13:26:41	208	207	53

NOTE: For source locations see Figure B-5-11

Trial Number: 01 (DP1-005)  
Date of Trial: 14 Sep 78  
Function Time: 11:02:59

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
11:03:09	4	5	3
11:03:10	8	6	3
11:03:11	9	5	3
11:03:12	14	9	3
11:03:13	25	15	4
11:03:14	31	20	5
11:03:15	45	27	8
11:03:16	48	28	8
11:03:17	50	33	8
11:03:18	51	37	8
11:03:19	53	37	8
11:03:20	33	40	8
11:03:21	31	44	9
11:03:22	32	54	10
11:03:23	39	65	11
11:03:24	46	65	11
11:03:25	46	66	11
11:03:26	46	67	12
11:03:27	46	71	13
11:03:28	47	71	12
11:03:29	47	71	18
11:03:39	128	95	23

NOTE: Vehicle travelled in a circle (20 m radius) about a point 95 m  
due south of sampling position 8.  
See Figure 1, page 8.

Trial Number: D2 (DPI-005)  
Date of Trial: 14 Sep 78  
Function Time: 11:23:59

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
11:24:00	4	4	3
11:24:01	6	6	3
11:24:02	8	6	3
11:24:03	12	10	3
11:24:04	12	10	5
11:24:05	13	12	5
11:24:06	15	14	6
11:24:07	15	17	7
11:24:08	16	18	7
11:24:09	18	18	8
11:24:10	19	21	8
11:24:11	19	24	7
11:24:12	26	24	6
11:24:13	26	29	6
11:24:14	26	29	6
11:24:15	27	29	5
11:24:16	30	30	4
11:24:17	35	30	3
11:24:18	36	33	3
11:24:19	49	35	3
11:24:20	51	35	3
11:24:21	58	38	3
11:24:22	62	38	3
11:24:23	68	46	5
11:24:24	69	47	5
11:24:25	72	48	5
11:24:26	74	50	5
11:24:27	74	51	5
11:24:28	77	54	5
11:24:29	80	54	6
11:24:39	150	86	6

NOTE: Vehicle travelled in a circle (20 m radius) about a point 75 m  
due south of sampling position 7.  
See Figure 1, page 8.

Trial Number: D3 (DP1-005)

Date of Trial: 14 Sep 78

Function Time: 11:59:59

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
12:00:00	3	5	1
12:00:01	6	7	2
12:00:02	13	11	2
12:00:03	18	17	2
12:00:04	18	22	3
12:00:05	18	25	3
12:00:06	18	26	3
12:00:07	20	29	3
12:00:08	25	34	3
12:00:09	43	38	4
12:00:10	54	46	4
12:00:11	59	51	4
12:00:12	58	51	4
12:00:13	59	53	5
12:00:14	61	54	5
12:00:15	65	54	5
12:00:16	67	58	5
12:00:17	77	60	5
12:00:18	77	63	5
12:00:19	80	65	5
12:00:20	80	69	5
12:00:21	88	72	5
12:00:22	89	75	5
12:00:23	98	84	5
12:00:24	101	86	5
12:00:25	102	84	5
12:00:26	107	75	5
12:00:27	105	75	5
12:00:28	105	74	5
12:00:29	105	74	5
12:00:39	N.D*	110	6

NOTE: Vehicle travelled in a circle (20 m radius) about a point 52.5 m due south of sampling position 4.  
See Figure 1, page 8.

\*N.D. = No Data



Trial Number: D4 (DP1-005)

Date of Trial: 14 Sep 78

Function Time: 12:20:57

Cloud Dimensions (meters)

<u>Time</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
12:20:58	5	6	2
12:20:59	12	7	2
12:21:00	12	10	2
12:21:01	12	12	2
12:21:02	14	12	3
12:21:03	16	20	3
12:21:04	32	31	3
12:21:05	39	31	3
12:21:06	47	33	3
12:21:07	54	34	3
12:21:08	60	35	3
12:21:09	72	39	5
12:21:10	74	40	5
12:21:11	74	40	5
12:21:12	76	43	5
12:21:13	79	51	5
12:21:14	89	53	5
12:21:15	97	53	5
12:21:16	109	53	5
12:21:17	111	53	5
12:21:18	114	55	5
12:21:19	116	50	5
12:21:20	116	46	5
12:21:21	125	46	6
12:21:22	122	48	6
12:21:23	119	48	6
12:21:24	111	48	5
12:21:25	113	48	5
12:21:26	117	49	5
12:21:27	118	52	5
12:21:37	141	57	5

NOTE: Vehicle travelled in a circle (20 m radius) about a point 52.5 m due south of sampling position 4.  
See Figure 1, page 8.

APPENDIX C. DEFICIENCIES, SHORTCOMINGS  
AND SUGGESTED IMPROVEMENTS

Not Used

APPENDIX D. MAINTENANCE DATA

Not Used

APPENDIX E. NEW EQUIPMENT TRAINING

Not Used

APPENDIX F. TABULAR DATA

<u>SECTION</u>	<u>TRIAL</u>
F-1	Trial C1
F-2	Trial C2
F-3	Trial E1
F-4	Trial E2
F-5	Trial E3
F-6	Trial D1
F-7	Trial D2
F-8	Trial D3
F-9	Trial D4

APPENDIX F. SECTION 1

CONTENTS

TRIAL: C1 , DPG DUST ADD -ON

PAGE

F-1-2	TABLE: DOSAGE VERSUS DISTANCE ALONG CENTER ROW
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TRIAL C1, DRG DUST ADD-ON, 28 SEP 1979, 10:13:02, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSAGE (GM/MIN/M**3)
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.00145
2	15.00	.00	1.50	.00275
3	30.00	.00	1.50	.00347
4	45.00	.00	1.50	.00250
5	60.00	.00	1.50	.00155
6	75.00	.00	1.50	.00582
8	105.00	.00	1.50	.00080
9	120.00	.00	1.50	.00028
10	135.00	.00	1.50	.00378
11	150.00	.00	1.50	.00297
12	165.00	.00	1.50	.00062
13	180.00	.00	1.50	.00097
14	195.00	.00	1.50	.00178
15	210.00	.00	1.50	.00023

DOSAGE ALONG SIGHT LINE\* .48696 (GM/MIN/M\*\*2)

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
 (MEASURED ALONG NO. 0)

TRIAL C1. DPG DUST ADDON  
 DATE: 28 SEP 1978  
 OBSERVANT: DT  
 FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
 (SECONDS)

TRANSMITTANCE  
 (0.4-0.7)

0.98	1.004
1.42	.924
2.86	1.037
3.79	.988
4.76	1.010
5.74	.990
6.69	1.012
7.61	.977
8.52	.938
9.42	.852
10.32	.927
11.22	1.092
12.12	.903
13.03	.902
13.93	.929
14.84	.933
15.76	.890
16.68	.908
17.60	.987
18.54	.937
19.47	.904
20.39	.985
21.34	.969
22.29	.902
23.23	1.038
24.16	.991
25.09	.842
26.02	.902
26.94	.983
27.86	.859
28.80	.919
29.73	.747
30.67	.802
31.61	.763
32.55	.759
33.48	.737
34.42	.789
35.35	.881
36.29	.912
37.25	.912



TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 7

TRIAL C1, DPG DUST ADDON  
DATE: 28 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

38.20	.904
39.16	.895
40.11	.955
41.07	1.068
42.02	.931
42.98	1.043
43.94	.917
44.90	.984
45.84	1.055
46.80	.980
47.78	.983
48.75	1.079
49.71	1.047
50.69	.953
51.67	.913
52.65	.896
53.62	1.095
54.57	.979
55.50	1.045
56.43	1.036
57.37	.952
58.30	1.046
59.23	1.068
60.13	.945
61.04	1.086
61.96	1.083
62.87	.986
63.78	1.011
64.68	.946
65.60	1.064
66.51	1.014
67.44	1.017
68.37	.969
69.31	1.001
70.26	.999
71.21	1.005
72.16	1.078
73.11	1.048
74.07	1.086
75.03	1.122

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
( ASJRED ALONG ROW 0

TRIAL C1, DPG DUST ADDON  
DATE: 28 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

75.97	.997
76.92	.912
77.87	.974
78.82	1.000
79.77	.957
80.74	1.040
81.71	.921
82.65	.968
83.57	1.001
84.49	.896
85.41	1.027
86.32	.959
87.24	.927
88.17	1.045
89.10	1.080
90.03	1.088
90.95	.961
91.89	1.021
92.83	.970
93.75	1.001
94.67	.889
95.59	.943
96.51	1.079
97.44	.997
98.37	1.002
99.29	1.027
100.23	1.018
101.18	.985
102.13	.970
103.06	1.024
103.97	1.056
104.90	1.024
105.83	1.058
106.76	.991
107.68	.935
108.56	.983
109.51	.962
110.44	.927
111.34	1.002
112.26	1.009

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL C1, DPG DUST ADDON

DATE: 28 SEP 1974

DISCRIMINANT: DT

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

113.18	1.029
114.11	.943
115.02	1.085
115.95	1.008
116.88	1.085
117.79	.934
118.72	.985
119.65	.960
120.57	.950
121.50	.990
122.40	.912
123.30	.997
124.19	1.171
125.09	1.003
125.99	.937
126.87	.979
127.76	.908
128.65	.937
129.57	.950
130.48	.957
131.40	.902
132.33	1.026
133.26	.950
134.20	.879
135.15	.922
136.10	.947
136.98	.985
137.83	.975
138.69	1.060
139.54	1.105
140.58	1.014
141.21	1.010
142.06	1.006
142.92	.899
143.77	1.119
144.63	.985
145.49	1.035
146.34	.982
147.19	1.022
148.03	.847

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
( ASJED ALONG RDV J)

TRIAL 01, OPG DUST ADDON  
DATE: 28 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

148.87	.991
149.71	.938
150.56	1.068
151.42	.944
152.27	.944
153.12	1.028
153.98	.944
154.82	.904
155.67	.944
156.52	.944
157.36	.976
158.20	1.018
159.02	.967
159.84	1.019
160.67	1.062
161.52	1.087
162.38	1.052
163.23	.933
164.08	1.016
164.94	1.122
165.79	.961
166.63	.923
167.47	1.014
168.31	1.030
169.16	.883
170.02	.985
170.86	.927
171.66	.820
172.57	1.026
173.43	.981
174.30	.945
175.17	.837
176.05	.930
176.92	.842
177.78	.865
178.65	1.051
179.52	.924
180.39	.920
181.25	.916
182.12	1.027

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL C1, DPG DUST ADDON

DATE: 26 SEP 1978

OBSERVANT: DT

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

182.98	1.043
183.83	.957
184.69	.911
185.55	1.016
186.40	.966
187.25	.933
188.10	1.019
188.95	1.091
189.81	1.081
190.65	1.020
191.49	1.025
192.33	1.108

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
 MEASURED ALONG RONA D

TRIAL C1, DPG DUST ADDON  
 DATE: 28 SEP 1974  
 OBSERVANT: DT  
 FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
 (SECONDS)

CONTRAST RATIO  
 (0.4-0.7)

.98	-.444
1.92	-.440
2.86	-.452
3.79	-.447
4.76	-.444
5.74	-.442
6.69	-.447
7.61	-.441
8.52	-.438
9.42	-.426
10.32	-.440
11.22	-.457
12.12	-.437
13.03	-.434
13.93	-.435
14.84	-.440
15.76	-.431
16.68	-.435
17.60	-.447
18.54	-.441
19.47	-.435
20.39	-.444
21.34	-.444
22.29	-.457
23.23	-.452
24.16	-.447
25.09	-.430
26.02	-.434
26.94	-.443
27.86	-.432
28.80	-.439
29.73	-.416
30.67	-.424
31.61	-.419
32.55	-.417
33.48	-.414
34.42	-.415
35.35	-.424
36.29	-.434
37.25	-.431

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL C1, DPG MUST ADDON

DATE: 28 SEP 1975

USCJURANT: DT

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

38.20	-.436
39.16	-.435
40.11	-.442
41.07	-.454
42.02	-.441
42.98	-.443
43.94	-.430
44.90	-.434
45.84	-.452
46.80	-.420
47.76	-.432
48.75	-.450
49.71	-.446
50.69	-.437
51.67	-.437
52.65	-.436
53.62	-.456
54.57	-.446
55.50	-.452
56.43	-.452
57.37	-.443
58.30	-.453
59.23	-.455
60.13	-.443
61.04	-.456
61.96	-.454
62.87	-.444
63.78	-.448
64.68	-.442
65.60	-.455
66.51	-.444
67.44	-.450
68.37	-.445
69.31	-.448
70.26	-.448
71.21	-.449
72.16	-.456
73.11	-.453
74.07	-.457
75.03	-.460

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL C1, DPG DUST ADDON  
DATE: 24 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

75.91	-.444
76.42	-.459
77.07	-.445
78.32	-.448
79.77	-.444
80.74	-.452
81.71	-.440
82.65	-.447
83.57	-.444
84.49	-.437
85.41	-.451
86.32	-.444
87.24	-.440
88.17	-.453
89.10	-.456
90.03	-.457
90.95	-.444
91.89	-.450
92.83	-.445
93.75	-.444
94.67	-.436
95.59	-.442
96.51	-.455
97.44	-.446
98.37	-.449
99.29	-.451
100.23	-.450
101.18	-.447
102.13	-.445
103.06	-.451
103.97	-.454
104.90	-.450
105.83	-.454
106.76	-.447
107.68	-.442
108.56	-.447
109.51	-.444
110.44	-.441
111.34	-.448
112.26	-.444



CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL C1, DPG DUST ADDON

DATE: 28 SEP 1978

OBSERVANT: DT

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

113.14	
114.11	-.451
115.02	-.442
115.45	-.456
116.88	-.446
117.79	-.456
118.72	-.441
119.65	-.445
120.57	-.441
121.50	-.443
122.40	-.447
123.30	-.439
124.19	-.448
125.09	-.464
125.99	-.449
126.87	-.441
127.76	-.445
128.65	-.438
129.57	-.442
130.48	-.443
131.40	-.444
132.33	-.437
133.26	-.451
134.20	-.443
135.15	-.435
136.10	-.440
136.98	-.446
137.83	-.446
138.69	-.446
139.54	-.454
140.38	-.458
141.21	-.450
142.06	-.449
142.92	-.455
143.77	-.436
144.63	-.459
145.49	-.447
146.34	-.452
147.19	-.446
148.03	-.451
	-.431

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW J

TRIAL C1, DPG MUST ADDON  
DATE: 28 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

148.87	-.447
149.71	-.441
150.56	-.455
151.42	-.442
152.27	-.445
153.12	-.451
153.98	-.442
154.82	-.438
155.67	-.447
156.52	-.448
157.36	-.446
158.20	-.450
159.02	-.445
159.84	-.450
160.67	-.454
161.52	-.456
162.38	-.453
163.23	-.441
164.08	-.450
164.94	-.459
165.79	-.444
166.63	-.440
167.47	-.444
168.31	-.451
169.16	-.435
170.02	-.447
170.86	-.441
171.66	-.427
172.57	-.451
173.43	-.446
174.30	-.442
175.17	-.450

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG X.O. 3

TRIAL C1, OPS DIST ADDON

DATE: 25 SEP 1974

USSCJRA7: 00

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	1.760
2.00	2.727
3.00	3.427
4.00	4.040
5.00	7.627
6.00	27.105
7.00	37.152
8.00	50.340
9.00	77.652
10.00	113.115
11.00	121.777
12.00	126.740
13.00	137.105
14.00	153.777
15.00	151.077
16.00	133.340
17.00	121.127
18.00	120.440
19.00	117.440
20.00	101.415
21.00	81.427
22.00	74.065
23.00	71.340
24.00	66.052
25.00	61.127
26.00	52.602
27.00	42.527
28.00	40.640
29.00	44.190
30.00	45.740
31.00	47.277
32.00	47.840
33.00	53.065
34.00	56.790
35.00	101.702
36.00	106.227
37.00	228.715
38.00	316.115
39.00	336.315
40.00	365.315

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG RUN OF

IAL C1, DPG DUST ADJON

DATE: 20 SEP 1974

USCJANT: DI

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	314.777
42.00	240.327
43.00	252.627
44.00	226.127
45.00	266.940
46.00	272.565
47.00	177.840
48.00	124.915
49.00	103.315
50.00	75.777
51.00	51.490
52.00	43.415
53.00	38.465
54.00	30.940
55.00	30.377
56.00	32.502
57.00	29.752
58.00	27.215
59.00	26.402
60.00	32.277
61.00	33.665
62.00	27.602
63.00	19.477
64.00	15.027
65.00	11.902
66.00	12.252
67.00	15.090
68.00	12.465
69.00	11.715
70.00	8.440
71.00	6.490
72.00	9.502
73.00	8.515
74.00	9.702
75.00	6.452
76.00	7.415
77.00	9.427
78.00	7.415
79.00	8.202
80.00	8.177

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 01, DRG DUST ADDON

DATE: 28 SEP 1978

OBSCURANT: DT

FUNCTION TIME 14:15:02

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

81.00	7.002
82.00	7.377
83.00	8.202
84.00	5.615
85.00	6.477
86.00	0.615
87.00	8.202
88.00	6.077
89.00	7.577
90.00	7.327
91.00	9.052
92.00	7.427
93.00	7.665
94.00	8.865
95.00	9.615
96.00	7.005
97.00	11.115
98.00	8.365
99.00	6.152
100.00	5.965
101.00	7.640
102.00	7.402
103.00	6.552
104.00	5.752
105.00	8.115
106.00	9.427
107.00	0.065
108.00	5.865
109.00	6.502
110.00	5.365
111.00	5.840
112.00	7.620
113.00	14.577
114.00	15.865
115.00	20.140
116.00	30.790
117.00	27.615
118.00	27.427
119.00	20.052
120.00	6.102

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 02, OPK DUST ADDON

DATE: 27 SEP 1978

03SCIRANT: 01

FUNCTION TIME 14:15:02

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	5.027
122.00	6.152
123.00	6.852
124.00	5.277
125.00	8.065
126.00	5.252
127.00	8.465
128.00	7.877
129.00	7.427
130.00	7.027
131.00	7.127
132.00	9.515
133.00	7.027
134.00	5.540
135.00	5.477
136.00	5.365
137.00	6.627
138.00	6.077
139.00	5.265
140.00	6.640
141.00	6.902
142.00	3.652
143.00	7.727
144.00	8.490
145.00	8.090
146.00	7.590
147.00	10.090
148.00	9.265
149.00	8.827
150.00	10.452
151.00	8.652
152.00	9.202
153.00	9.002
154.00	7.390
155.00	7.277
156.00	7.477
157.00	6.702
158.00	7.502
159.00	8.227
160.00	7.440

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW D

TRIAL C1, DPG DUST ADDON

DATE: 28 SEP 1978

USCJURANT: 01

FUNCTION TIME 14:13:02

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMHERTS)

161.00	8.315
162.00	5.915
163.00	8.027
164.00	10.052
165.00	6.552
166.00	6.402
167.00	4.627
168.00	5.540
169.00	7.090
170.00	8.527
171.00	8.015
172.00	9.715
173.00	7.352
174.00	4.727
175.00	6.502
176.00	6.452
177.00	6.777
178.00	6.715
179.00	7.840
180.00	5.077
181.00	6.477
182.00	6.377
183.00	6.552
184.00	6.265
185.00	6.465
186.00	7.552
187.00	7.665
188.00	7.752
189.00	7.852
190.00	9.865
191.00	6.715
192.00	5.565

TRANSMITTANCE, CLOUD LUMINANCE FOR  
 SAMPLE WITH 1.050 MICROPIETER LOCATED ON CENTER 20.

TRIAL NUMBER....01 (001-005)  
 DATE OF TRIAL...24 SEP 1974  
 FUNCTION TIME...1403: 2  
 OBSERVANT.....DUST/OF ARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.050)	CLOUD LUMINANCE MICROWATTS/CM**2/SP/NO
1.0	1.005	.009
2.0	.990	.009
3.0	.980	.034
3.9	1.010	.000
4.7	.972	.046
5.7	.957	.054
6.3	1.020	.000
7.7	1.020	.030
8.5	.934	.105
9.2	.986	.159
10.3	.913	.143
11.3	.957	.079
12.2	.936	.102
12.3	.962	.073
14.0	.970	.022
14.2	.904	.118
15.4	.873	.158
16.4	.931	.077
17.7	.907	.002
18.4	.957	.064
19.3	.863	.169
20.4	.940	.079
21.4	.936	.102
22.3	1.030	.024
23.2	.795	.068
24.3	.906	.199
25.2	.913	.268
26.1	.432	.360
27.0	.480	.300
28.0	.914	.411
29.9	.448	.335
29.8	.792	.406
30.4	.774	.441
31.7	.761	.440
32.5	.769	.408
33.4	.940	.336
34.5	.761	.333
35.4	.900	.529
36.4	.400	.299
37.3	.483	.209
38.3	.926	.129



TRANSMITTANCE AND CLOUD DISTANCE FOR  
TABLE WITH 1.000 MICROMETERS LOCATED ON CENTER ROD

TOTAL NUMBER.....51 (001-005)  
DATE OF TRIAL...24 SEP 1974  
EJECTION TIME...14:14: 2  
PROJECT.....JUST/DENNIS

SECTION F211 FUNCTION	TRANSMITTANCE (1.000)	CLOUD DISTANCE MICROMETERS/CM**2/SR/MM
39.3	1.010	.050
40.2	.997	.086
41.2	.955	.194
42.0	.992	.008
43.0	1.034	.000
44.0	1.056	.015
45.0	1.048	.000
46.0	1.020	.000
46.9	.959	.076
47.9	.997	.065
48.8	1.045	.008
49.7	1.007	.034
50.8	.985	.156
51.7	.921	.085
52.4	1.020	.000
53.7	1.002	.024
54.7	.945	.076
55.4	.934	.099
56.5	.984	.093
57.4	.997	.033
58.4	.941	.081
59.2	1.002	.012
60.2	.944	.109
61.1	.916	.125
61.9	1.012	.000
63.0	.951	.038
63.9	.936	.055
64.4	.984	.032
65.7	1.023	.021
66.5	.906	.105
67.4	.979	.022
68.4	1.024	.000
69.3	1.064	.000
70.2	1.050	.000
71.2	.982	.004
72.2	.951	.054
73.2	.901	.126
74.0	.949	.057
75.1	.982	.004
76.1	.944	.041
77.0	.929	.064

TRANS MITTANCE, AND CLOUD LUMINANCE FOR  
 SCALE 100 (1.00) MICRO FIER LOCATED ON CENTER 20.

TOTAL LUMINANCE.....01 (001-005)  
 DATE OF TRIAL....28 SEP 1978  
 FUNCTION TIME....3:13: 2  
 DRSC (M. T. .... POSTAGE PAID

SECONDS FROM FUNCTION	TRANSMITTANCE (1.160)	CLOUD LUMINANCE MICRO LUMINANCE/CM**2/SR/M
74.0	1.025	.000
74.9	.951	.051
75.9	.951	.054
80.4	1.030	.012
81.4	.977	.050
82.7	1.010	.000
83.5	.957	.044
84.5	1.115	.000
85.4	1.000	.015
85.7	1.119	.000
87.3	.990	.170
88.1	.954	.035
89.1	1.109	.000
90.1	.972	.052
90.7	1.071	.000
92.0	.920	.074
92.9	.962	.058
93.4	1.139	.000
94.4	.975	.155
95.6	.918	.091
96.5	.974	.059
97.5	1.063	.000
98.5	1.054	.000
99.4	.903	.124
100.3	.906	.091
101.2	.971	.050
102.2	1.053	.000
103.1	1.070	.000
104.1	1.007	.006
105.0	1.053	.000
105.9	.990	.026
106.3	1.023	.000
107.5	1.061	.000
109.5	1.020	.000
109.6	1.080	.000
110.5	.931	.108
111.3	1.048	.000
112.4	1.045	.000
113.3	1.160	.000
114.1	1.038	.000
115.0	1.134	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
LEVEL WITH 1.000 MICROMETER LOCATED IN CENTER OF

TOTAL WATERS...01 (001-005)  
DATE OF TEST...28 MAR 1978  
POSITION TIME...143133 Z  
OBSERVANT.....JST/DEARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/MM
115.0	1.034	.000
115.4	.945	.036
117.0	.940	.032
119.4	.929	.054
119.4	.967	.005
120.7	1.040	.000
121.5	1.048	.000
122.0	.954	.045
123.4	.957	.058
124.2	1.023	.000
125.1	.951	.069
125.1	1.010	.004
125.4	1.035	.000
127.7	.921	.104
129.7	1.050	.000
129.7	1.035	.000
130.5	.957	.048
131.4	1.050	.000
132.0	1.020	.000
133.2	.954	.051
134.1	1.030	.000
135.3	.954	.020
135.1	1.025	.000
137.0	1.040	.000
137.9	.973	.000
138.4	.999	.000
139.5	1.00	.000
140.4	.969	.091
141.3	1.023	.036
142.1	1.096	.000
142.9	.921	.119
143.7	.974	.059
144.7	.987	.061
145.5	.967	.068
146.4	1.010	.019
147.2	1.024	.015
148.1	.924	.148
149.9	.977	.055
149.7	.941	.081
150.5	1.045	.000
151.8	1.028	.015

THESE DATA WERE OBTAINED BY THE USE OF A  
 MODEL WITH 1,000 POINTS LOCATED IN CENTER MODE

TOTAL NUMBER.....01 (001-005)

DATE OF TOTAL.....SEP 1978

EXECUTION TIME.....14:13:2

BASE NAME.....DISTANCE

SECTION FROM FUNCTION	TRANSITANCE (1,000)	CLOUD LOWING ATCH/ATTS/CH**2/SR/VA
152.2	1.043	.000
153.2	.901	.125
154.0	.979	.058
154.4	.960	.055
155.7	1.012	.015
155.4	1.071	.000
157.3	1.068	.000
158.3	.997	.055
159.0	1.065	.000
159.4	.940	.058
160.7	.967	.045
161.5	.969	.065
162.4	.987	.045
163.2	1.058	.000
164.0	1.002	.043
164.0	.979	.038
165.7	.994	.032
165.7	1.007	.038
167.5	1.045	.010
168.2	.946	.091
169.2	1.033	.000
170.0	.944	.053
170.3	1.121	.000
171.4	1.025	.018
172.5	.992	.024
173.4	1.043	.000
174.3	1.101	.000
175.2	.990	.025
175.1	1.017	.000
177.0	1.010	.004
177.4	1.096	.000
178.7	.990	.042
179.4	1.023	.000
180.5	1.044	.000
181.5	.993	.104
182.2	.990	.026
183.0	1.023	.000
183.3	.959	.075
184.7	1.028	.015
185.6	1.091	.000
185.5	1.038	.000

TRANS ILLUMINANCE, AND CLOUD LUMINANCE AIR  
 AVAILABLE WITH 1.000 MICROTATTS LOCATED IN CENTER 900.

TRIAL NUMBER....01 (001-005)  
 DATE OF TRIAL....25 SEP 1974  
 EXECUTION TIME...14:13: 2  
 INACCURAT.....JUST/DEGRIS

SECTIONS FROM FUNCTION	TRANS ILLUMINANCE (1.000)	CLOUD LUMINANCE MICROTATTS/CM**2/SR/MM
187.5	1.025	
188.1	.997	.014
188.9	.995	.033
189.7	1.017	.036
190.5	.995	.011
191.5	1.045	.062
192.4	1.054	.010
		.000

# WAVELENGTHS OF SPECTRA INDICATED WAVELENGTH AND LOCATION

TELNO. 30704...01 (021-005)  
 DATE OF TELNO...25 SEP 1973  
 LOCATION TELNO...14:13:2  
 OBSERVANT...JUSTICE

SECTION 1 WAVELENGTH WAVELENGTH  
 FROM 5.145/25 159 9.750/CENTER  
 FUNCTION

1.0	1.061	1.020
2.0	1.104	.980
3.0	1.157	1.115
4.0	1.183	1.001
5.0	.998	1.158
6.0	.950	1.220
7.0	.902	1.142
8.0	.912	1.032
9.0	.902	.929
10.0	1.011	.992
11.0	.952	.924
12.0	.991	.914
13.0	.951	1.011
14.0	.991	.932
15.0	.920	1.075
16.0	.970	1.060
17.0	1.052	.992
18.0	.955	.834
19.0	.941	.917
20.0	.900	1.025
21.0	.901	.928
22.0	.997	.994
23.0	1.021	1.015
24.0	.958	1.033
25.0	.965	.993
26.0	.935	.957
27.0	1.005	.920
28.0	1.064	1.011
29.0	.904	1.015
30.0	.924	.990
31.0	.933	.892
32.0	.970	.827
33.0	.741	.843
34.0	.757	.940
35.0	.934	.942
36.0	.944	.842
37.0	.899	.868
38.0	.815	.905
39.0	.850	1.072
40.0	1.005	1.083
41.0	.991	1.020

# TRANSmittance FOR INDICATED WAVELENGTH AND LOCATION

SERIAL NO. REF. .... 01 (DP1-005)  
 DATE OF TEST. .... 25 SEP 1974  
 POSITION. .... 142132 2  
 DISC. .... 0081/00815

SPECIES  
 1.0  
 1.0

WAVELENGTH	WAVELENGTH
9.445/9.450	9.750/CENTER
42.0	.958
43.0	.950
44.0	1.049
45.0	1.004
46.0	1.006
47.0	.910
48.0	.912
49.0	1.043
50.0	1.006
51.0	.971
52.0	1.057
53.0	.902
54.0	.944
55.0	.928
56.0	.945
57.0	.980
58.0	.945
59.0	1.017
60.0	1.052
61.0	.950
62.0	.985
63.0	.952
64.0	1.016
65.0	1.055
66.0	1.044
67.0	1.011
68.0	1.037
69.0	.913
70.0	.949
71.0	.967
72.0	.962
73.0	.929
74.0	1.077
75.0	.993
76.0	1.083
77.0	.960
78.0	1.023
79.0	1.177
80.0	1.074
81.0	1.003
82.0	.934

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (OP1-005)  
 DATE OF TRIAL....28 SEP 1974  
 FURLOW TIME....141131 2  
 DISC NAME.....JUST/DEBRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.643/CENTER 4.750/CENTER  
 FUNCTION

83.0	.952	1.052
84.0	1.057	.986
85.0	.976	.971
86.0	1.176	.944
87.0	.967	1.014
88.0	.967	.953
89.0	.922	.954
90.0	.947	.838
91.0	.974	1.038
92.0	1.114	1.164
93.0	.902	1.176
94.0	1.116	1.067
95.0	1.083	.990
96.0	.821	1.053
97.0	.929	1.015
98.0	.985	1.010
99.0	1.046	.971
100.0	1.075	1.021
101.0	.973	1.042
102.0	1.092	1.073
103.0	1.102	.987
104.0	.970	.962
105.0	.923	1.033
106.0	.920	1.034
107.0	.934	.863
108.0	.873	1.010
109.0	1.025	1.118
110.0	1.807	1.138
111.0	1.003	1.041
112.0	.955	1.089
113.0	1.048	1.020
114.0	.892	1.019
115.0	1.136	.870
116.0	1.148	.966
117.0	.942	1.019
118.0	1.077	.932
119.0	1.015	1.063
120.0	1.047	.956
121.0	1.015	.921
122.0	.954	.888
123.0	.980	.896



# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (DP1-005)  
 DATE OF TRIAL....25 SEP 1978  
 FUNCTION TIME....14:13: 2  
 OBSERVANT.....JOSEPH/DEBRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.003/CENTER 9.750/CENTER  
 FUNCTION

121.0	.899	.933
125.0	.939	.972
126.0	.988	.995
127.0	.917	.929
128.0	1.014	.945
129.0	.888	.957
130.0	1.030	1.072
131.0	1.022	.995
132.0	.883	.817
133.0	.906	.823
134.0	.922	1.073
135.0	.958	.951
136.0	.906	.927
137.0	1.096	.875
138.0	.962	.939
139.0	1.014	.951
140.0	1.015	.847
141.0	.960	.970
142.0	1.055	.831
143.0	.951	1.009
144.0	.991	1.019
145.0	1.062	1.054
146.0	.979	1.005
147.0	1.074	1.011
148.0	.957	1.084
149.0	.914	1.022
150.0	.919	.941
151.0	1.117	1.097
152.0	.970	1.003
153.0	.958	1.013
154.0	.986	.906
155.0	1.036	.968
156.0	1.037	.906
157.0	.967	.975
158.0	1.076	.932
159.0	1.089	.857
160.0	1.056	.958
161.0	1.016	.974
162.0	1.091	1.087
163.0	.980	1.089
164.0	.942	1.054

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER.....01 (DP1-005)  
 DATE OF TRIAL....28 SEP 1974  
 REDUCTION TIME....14:13: 2  
 OBSERVANT.....JOST/DEARIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.445/CENTER 3.750/CENTER  
 FACILITY

165.0	1.018	.967
166.0	1.015	.920
167.0	.908	.807
168.0	.980	.852
169.0	.900	.967
170.0	1.093	.973
171.0	.940	.947
172.0	.897	1.044
173.0	.855	.874
174.0	.947	.795
175.0	.870	.970
176.0	1.030	.824
177.0	.955	.900
178.0	1.148	.926
179.0	.941	.886
180.0	.915	.775
181.0	1.042	.741
182.0	.994	.914
183.0	.946	.943
184.0	1.071	.942
185.0	1.014	.904
186.0	.968	.930
187.0	1.037	.830
188.0	1.025	.962
189.0	1.186	.922
190.0	1.030	.931
191.0	1.067	.955
192.0	1.004	1.050

CL VALUES (GMA/142) HAVE CALCULATED USING TRANSMITTANCE  
ADJUSTMENT COEFFICIENT

TRIAL NUMBER...01 (001-005)  
DATE OF TRIAL...28 SEP 1978  
FUNCTION TIME...14:13:12  
OBSERVANT...JRS/DEARIS

SECONDS FROM FUNCTION	CENTER
1.0	.00000
2.0	.00000
3.0	.00000
4.0	.00000
5.0	.00000
6.0	.00055
7.0	.15087
8.0	.31033
9.0	.29020
10.0	.02149
11.0	.00000
12.0	.13292
13.0	.34700
14.0	.17291
15.0	.03134
16.0	.25234
17.0	.44282
18.0	.00000
19.0	.05165
20.0	.54274
21.0	.35977
22.0	.35638
23.0	.01054
24.0	.00000
25.0	.14624
26.0	.12107
27.0	.22921
28.0	.00000
29.0	.00000
30.0	.74576
31.0	.27250
32.0	.62511
33.0	.47522
34.0	.84694
35.0	.95448
36.0	.23466
37.0	.58245
38.0	.36248
39.0	.69404
40.0	.55695
41.0	.00000
42.0	.39494

CL VALUES (GM/NAAP) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....01 (0P1-005)  
DATE OF TRIAL...28 SEP 1974  
RUNNING TIME...14:13: 2  
DISCOUNT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
42.0	.52473
43.0	.17467
44.0	.00000
45.0	.00000
46.0	.00000
47.0	.32390
48.0	.31620
49.0	.00000
50.0	.00000
51.0	.10052
52.0	.00000
53.0	.35214
54.0	.05435
55.0	.26172
56.0	.01575
57.0	.48514
58.0	.05302
59.0	.00000
60.0	.00000
61.0	.24765
62.0	.05083
63.0	.16835
64.0	.00000
65.0	.00000
66.0	.00000
67.0	.00000
68.0	.00000
69.0	.31062
70.0	.17794
71.0	.10712
72.0	.51017
73.0	.25164
74.0	.00000
75.0	.02482
76.0	.00000
77.0	.13936
78.0	.00000
79.0	.00000
80.0	.00000
81.0	.00000
82.0	.23314

CL VALUES (847442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....01 (0P1-005)  
DATE OF TRIAL...25 SEP 1978  
FUNCTION TIME...14:13: 2  
OBSERVATION.....JUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
83.0	.24014
84.0	.00000
85.0	.08297
86.0	.00000
87.0	.11436
88.0	.11495
89.0	.26975
90.0	.18740
91.0	.09029
92.0	.00000
93.0	.35362
94.0	.00000
95.0	.00000
96.0	.67467
97.0	.25391
98.0	.05187
99.0	.00000
100.0	.00000
101.0	.09283
102.0	.00000
103.0	.00000
104.0	.10412
105.0	.27269
106.0	.28676
107.0	.23289
108.0	.46639
109.0	.00000
110.0	.00000
111.0	.00000
112.0	.15597
113.0	.00000
114.0	.39134
115.0	.00000
116.0	.00000
117.0	.20527
118.0	.00000
119.0	.00000
120.0	.00000
121.0	.00000
122.0	.16125
123.0	.06949

CL VALUES (COP/4442) WERE CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....01 (001-005)  
DATE OF TRIAL....28 SEP 1979  
EXTINCTION COEFF.....14:13: 2  
ANALYST.....JST/DEARIS

SECONDS	FUNCTION	CENTER
124.0		.52084
125.0		.21500
126.0		.04236
127.0		.29500
128.0		.10000
129.0		.41771
130.0		.00000
131.0		.00000
132.0		.42549
133.0		.33704
134.0		.27899
135.0		.14425
136.0		.01334
137.0		.00000
138.0		.13177
139.0		.00000
140.0		.00000
141.0		.02232
142.0		.00000
143.0		.17150
144.0		.03041
145.0		.00000
146.0		.97136
147.0		.00000
148.0		.15127
149.0		.30946
150.0		.20743
151.0		.00000
152.0		.10371
153.0		.14918
154.0		.04769
155.0		.00000
156.0		.00000
157.0		.11444
158.0		.00000
159.0		.00000
160.0		.00000
161.0		.00000
162.0		.00000
163.0		.06984
164.0		.20451

CL VALUES (G175\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TOTAL NUMBER....01 (JPI-005)  
DATE OF TOTAL...25 SEP 1974  
FUNCTION TIME...14:13: 2  
UNSLURANT.....JUST/DEBRIS

SECONDS 5430	FUNCTION	CENTER
165.0		.00000
166.0		.00000
167.0		.33021
168.0		.06432
169.0		.04394
170.0		.00000
171.0		.21234
172.0		.37148
173.0		.02313
174.0		.18624
175.0		.44063
176.0		.00000
177.0		.15682
178.0		.00000
179.0		.20649
180.0		.29170
181.0		.00000
182.0		.00782
183.0		.18944
184.0		.00000
185.0		.00000
186.0		.11222
187.0		.00000
188.0		.00000
189.0		.00000
190.0		.00000
191.0		.00000
192.0		.00000

APPENDIX F, SECTION 2

CONTENTS

TRIAL: C2 , DPG DUST ADD-ON

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F-2-2	TABLE: DOSAGE VERSUS DISTANCE ALONG CENTER ROW
F-2-3	TABLE: TRANSMITTANCE FOR WAVELENGTH BETWEEN 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-2-8	TABLE: CONTRAST RATIO FOR WAVELENGTH BETWEEN 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-2-13	TABLE: LUMINANCE FOR WAVELENGTH 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-2-18	TABLE: TRANSMITTANCE AND CLOUD LUMINANCE FOR WAVELENGTH 1.060 $\mu\text{m}$ LOCATED ON CENTER ROW
F-2-23	TABLE: TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION
F-2-28	TABLE: CL VALUES ( $\text{GM}/\text{m}^2$ ) BACK CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT



TRIAL C2, OPG DUST ADD-ON, 29 SEP 1978, 14145130, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSEAGE (GM, MIN/M**3)
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.00027
2	15.00	.00	1.50	.00168
3	30.00	.00	1.50	.00168
4	45.00	.00	1.50	.00557
5	60.00	.00	1.50	.03348
6	75.00	.00	1.30	.00775
7	90.00	.00	1.50	.01937
8	105.00	.00	1.50	.02565
9	120.00	.00	1.50	.00108
10	135.00	.00	1.50	.00257
11	150.00	.00	1.50	.00435
12	165.00	.00	1.50	.00343
13	180.00	.00	1.50	.00192
14	195.00	.00	1.50	.00347
15	210.00	.00	1.50	.00200

DOSEAGE ALONG SIGHT LINE= 1.70950 (GM, MIN/M\*\*2)

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
 MEASURED ALONG 400.0

TRIAL 02, DPG JUST ADDON  
 DATE: 29 SEP 1978  
 OBSERVANT: DT  
 FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
 (SECONDS)

TRANSMITTANCE  
 (0.4-0.7)

1.55	.753
2.34	.902
3.32	1.124
4.24	1.065
5.24	1.030
6.21	.985
7.15	.955
8.12	.910
9.06	.902
10.05	.908
10.94	.705
11.45	.645
12.73	.444
13.91	.526
14.88	.553
15.83	.627
16.62	.465
17.76	.512
18.74	.344
19.76	.149
20.72	.234
21.70	.234
22.67	.320
23.65	.347
24.64	.382
25.63	.482
26.60	.527
27.56	.432
28.51	.379
29.46	.474
30.40	.457
31.35	.476
32.21	.316
33.26	.384
34.22	.466
35.19	.450
36.18	.471
37.16	.573
38.13	.614
39.10	.587

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW J

TRIAL C2, DPG DUST ADDON

DATE: 29 SEP 1974

OBSERVANT: DT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION (SECONDS)	TRANSMITTANCE (0.4-0.7)
40.07	.546
41.03	.704
42.00	.634
42.90	.612
43.96	.703
44.93	.922
45.91	.915
46.88	.819
47.85	.917
48.82	1.071
49.81	.983
50.80	.966
51.80	.914
52.90	.861
53.82	.967
54.83	.993
55.81	1.026
56.80	.937
57.78	.907
58.76	1.021
59.67	.891
60.71	.978
61.68	1.012
62.60	1.049
63.64	1.054
64.61	.993
65.58	1.059
66.57	.975
67.56	.963
68.54	.930
69.51	1.012
70.49	.986
71.46	.965
72.43	1.068
73.40	1.034
74.38	1.065
75.40	1.026
76.39	1.025
77.39	.926
78.36	.912

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW J

TRIAL C2, DPG DUST ADDON

DATE: 29 SEP 1978

OBSERVANT: DT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

79.37	1.046
80.36	1.017
81.37	1.094
82.37	1.100
83.37	1.078
84.39	1.054
85.38	1.115
86.38	1.000
87.32	.916
88.37	1.061
89.36	.991
90.41	.985
91.42	1.137
92.41	1.131
93.41	1.100
94.42	1.075
95.42	1.074
96.43	.957
97.42	1.006
98.42	1.052
99.43	.983
100.44	.963
101.45	1.038
102.48	.975
103.50	1.018
104.52	1.014
105.54	1.004
106.54	1.130
107.57	1.008
108.60	.938
109.62	1.104
110.65	1.139
111.67	.995
112.56	.929
113.44	.937
114.30	1.026
115.17	1.006
116.04	1.016
116.91	1.008
117.80	1.068

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL C2, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSERVANT: UF  
FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

118.68	.894
119.52	1.129
120.47	.972
121.36	1.153
122.25	1.054
123.14	1.057
124.03	1.011
124.91	.963
125.79	.948
126.68	1.088
127.56	1.025
128.43	.976
129.30	1.015
130.18	1.040
131.07	.937
131.93	1.052
132.81	1.058
133.70	1.104
134.62	.990
135.52	.986
136.38	.987
137.31	1.035
138.20	1.032
139.10	1.036
140.00	1.138
140.79	1.006
141.77	.920
142.65	1.011
143.54	.972
144.43	.889
145.33	.959
146.23	1.047
147.14	.926
148.05	1.008
148.95	1.022
149.86	1.006
150.77	1.041
151.68	1.146
152.54	1.014
153.42	.901

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
 (TASJED ALONG ROW 0)

TRIAL C27 DPG MUST 4000W

DATE: 29 SEP 1978

CHSCJANT: DT

FUNCTION TIME 14:05:30

TIME AFTER FUNCTION  
 (SECONDS)

TRANSMITTANCE  
 (0.4-0.7)

158.43	1.070
155.34	1.124
156.24	1.040
157.14	1.015
158.05	.993
158.95	1.093
159.85	1.031
160.76	.988
161.67	1.035
162.56	1.118
163.45	1.068
164.33	1.068
165.22	1.103
166.11	1.082
166.99	1.228
167.89	1.000
168.78	1.085
169.68	.943
170.58	1.216
171.48	1.150
172.38	1.119
173.21	1.175
174.18	1.085

CONTRAST RATIO FOR AAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW J

TRIAL C2, UPG DUST ADDON

DATE: 29 SEP 1978

OBSERVANT: DT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.35	-.353
2.34	-.353
3.32	-.362
4.28	-.349
5.24	-.324
6.21	-.328
7.16	-.334
8.12	-.342
9.06	-.346
10.03	-.337
10.99	-.280
11.95	-.293
12.93	-.291
13.91	-.297
14.88	-.302
15.83	-.315
16.82	-.284
17.76	-.244
18.74	-.253
19.76	-.166
20.72	-.176
21.70	-.178
22.67	-.241
23.65	-.245
24.64	-.249
25.63	-.248
26.60	-.290
27.56	-.268
28.51	-.223
29.46	-.253
30.40	-.280
31.35	-.275
32.21	-.234
33.26	-.243
34.22	-.273
35.19	-.271
36.18	-.268
37.16	-.297
38.13	-.312
39.10	-.306

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
(MEASURED ALONG ROW 0)

TRIAL C2, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

40.07	-.309
41.03	-.325
42.00	-.294
42.90	-.307
43.96	-.326
44.93	-.349
45.91	-.343
46.88	-.339
47.85	-.345
48.82	-.361
49.81	-.355
50.80	-.353
51.80	-.348
52.80	-.341
53.82	-.350
54.83	-.354
55.81	-.357
56.80	-.349
57.78	-.346
58.76	-.358
59.67	-.346
60.71	-.354
61.68	-.356
62.60	-.360
63.64	-.359
64.61	-.356
65.58	-.360
66.57	-.354
67.56	-.353
68.54	-.350
69.51	-.357
70.49	-.355
71.46	-.354
72.43	-.362
73.40	-.359
74.38	-.361
75.40	-.358
76.39	-.358
77.39	-.350
78.38	-.349



CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL C2, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

79.37	-.360
80.36	-.358
81.37	-.363
82.37	-.364
83.37	-.362
84.39	-.361
85.38	-.365
86.38	-.356
87.32	-.349
88.37	-.361
89.38	-.356
90.41	-.355
91.42	-.366
92.41	-.366
93.41	-.364
94.42	-.362
95.42	-.362
96.43	-.353
97.42	-.357
98.42	-.361
99.43	-.355
100.44	-.353
101.45	-.359
102.48	-.354
103.50	-.357
104.52	-.357
105.54	-.357
106.54	-.366
107.57	-.357
108.60	-.351
109.62	-.364
110.65	-.366
111.67	-.356
112.56	-.350
113.44	-.351
114.30	-.358
115.17	-.357
116.04	-.358
116.91	-.356
117.80	-.361

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
(MEASURED ALONG ROW J)

TRIAL C2, DPG JUST ADDON

DATE: 29 SEP 1978

USCJANT: OT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

118.50	-.347
119.52	-.366
120.47	-.354
121.36	-.367
122.25	-.360
123.14	-.361
124.03	-.357
124.91	-.353
125.79	-.352
126.68	-.363
127.56	-.358
128.43	-.355
129.30	-.358
130.18	-.359
131.07	-.351
131.93	-.360
132.81	-.361
133.70	-.364
134.62	-.356
135.52	-.355
136.38	-.355
137.31	-.359
138.20	-.359
139.10	-.359
140.00	-.366
140.89	-.357
141.77	-.350
142.65	-.357
143.54	-.354
144.43	-.347
145.33	-.353
146.23	-.360
147.14	-.350
148.05	-.357
148.95	-.358
149.86	-.357
150.77	-.360
151.68	-.367
152.54	-.356
153.52	-.348

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 1

TRIAL C2, OPG DUST ADDON  
DATE: 29 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

154.43	-.362
155.34	-.365
156.24	-.360
157.14	-.358
158.05	-.356
158.95	-.363
159.85	-.359
160.76	-.356
161.67	-.359
162.56	-.365
163.45	-.362
164.33	-.361
165.22	-.364
166.11	-.363

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG WITH

TRIAL C2, DPG DUST ADDON

DATE: 29 SEP 1978

USCJANT: DT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	.000
2.00	.000
3.00	4.419
4.00	54.131
5.00	256.344
6.00	890.331
7.00	1491.431
8.00	2045.444
9.00	1783.881
10.00	1919.131
11.00	2117.243
12.00	2214.594
13.00	2214.594
14.00	2214.594
15.00	2214.594
16.00	2214.594
17.00	2214.594
18.00	1953.008
19.00	1892.508
20.00	1993.408
21.00	2139.669
22.00	1998.881
23.00	1996.044
24.00	1901.889
25.00	1833.681
26.00	2071.356
27.00	2029.456
28.00	1983.931
29.00	1712.194
30.00	1457.119
31.00	1443.131
32.00	1549.969
33.00	1444.219
34.00	1175.481
35.00	1013.769
36.00	851.781
37.00	542.456
38.00	355.444
39.00	328.669
40.00	267.256

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG WITH D

TRIAL C2, DPG DUST ADDON

DATE: 22 SEP 1974

OBSERVANT: CT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	213.269
42.00	131.069
43.00	110.094
44.00	110.669
45.00	108.594
46.00	81.444
47.00	84.244
48.00	104.019
49.00	106.906
50.00	106.931
51.00	110.981
52.00	116.319
53.00	102.319
54.00	80.369
55.00	71.581
56.00	64.806
57.00	54.981
58.00	38.844
59.00	35.631
60.00	30.369
61.00	32.144
62.00	25.706
63.00	22.181
64.00	13.669
65.00	11.469
66.00	7.244
67.00	6.444
68.00	4.519
69.00	3.094
70.00	4.431
71.00	4.444
72.00	4.769
73.00	3.819
74.00	5.619
75.00	2.894
76.00	3.569
77.00	2.994
78.00	.764
79.00	4.919
80.00	5.356

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW D

( HIA, C2, DPG JUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 14145130

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMHERTS)

81.00	4.769
82.00	3.956
83.00	6.544
84.00	4.756
85.00	4.981
86.00	6.256
87.00	6.044
88.00	6.544
89.00	2.314
90.00	3.344
91.00	7.281
92.00	5.706
93.00	2.331
94.00	2.481
95.00	1.469
96.00	3.431
97.00	1.856
98.00	4.131
99.00	4.456
100.00	6.169
101.00	2.706
102.00	4.169
103.00	5.469
104.00	.756
105.00	3.444
106.00	1.806
107.00	.881
108.00	2.614
109.00	3.956
110.00	3.461
111.00	5.494
112.00	4.131
113.00	4.656
114.00	5.294
115.00	4.656
116.00	3.231
117.00	7.356
118.00	6.044
119.00	2.506
120.00	3.094

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROAD

TRIAL C2, OPG JUST ADDON

DATE: 29 SEP 1978

OBSERVANT: DT

FUNCTION TIME 14:45:30

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	.081
122.00	3.056
123.00	.794
124.00	1.106
125.00	1.331
126.00	.000
127.00	.000
128.00	.106
129.00	.000
130.00	.969
131.00	.000
132.00	.000
133.00	.000
134.00	.000
135.00	.000
136.00	.000
137.00	1.269
138.00	.000
139.00	.000
140.00	.000
141.00	.000
142.00	.000
143.00	.000
144.00	.000
145.00	1.631
146.00	.000
147.00	.000
148.00	.000
149.00	.000
150.00	.000
151.00	.000
152.00	.000
153.00	.594
154.00	.000
155.00	.000
156.00	.000
157.00	.000
158.00	.000
159.00	.000
160.00	.000

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROLL 11

TRIAL CP, ORG DUST ADDON

DATE: 29 SEP 1978

OBSERVANT: DT

FUNCTION TIME 14345:30

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	.000
162.00	.000
163.00	.000
164.00	1.769
165.00	1.594
166.00	2.731
167.00	.000
168.00	.000
169.00	.000
170.00	.256
171.00	1.431
172.00	7.894
173.00	7.069
174.00	6.981
	5.556



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
SAMPLE WITH 1.060 MICROMETER LOCATED ON CENTER ROAD

TRIAL NUMBER...02 (DPI-005)  
DATE OF TRIAL...29 SEP 1978  
EXPOSITION TIME...14:45:30  
OBSERVANT.....DUST/DEFRIS

SECTIONS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/MM
1.4	1.039	.000
2.4	1.048	.000
3.3	.925	.049
4.2	.970	.020
5.3	.989	.000
6.2	1.006	.000
7.2	.958	.016
8.1	.920	.069
9.1	.949	.072
10.0	.816	.220
11.0	.823	.244
11.9	.638	.475
13.0	.543	.616
13.8	.484	.707
15.0	.548	.674
15.9	.560	.694
16.7	.448	.851
17.7	.557	.805
18.6	.363	1.061
19.6	.194	1.276
20.6	.249	1.237
21.8	.249	1.206
22.7	.318	1.075
23.7	.389	.926
24.7	.467	.832
25.7	.477	.823
26.7	.524	.776
27.4	.441	.874
28.4	.415	.931
29.5	.439	.923
30.5	.474	.872
31.4	.415	.916
32.3	.287	1.027
33.3	.360	.939
34.2	.398	.885
35.2	.429	.855
36.3	.481	.803
37.2	.486	.798
38.1	.579	.706
39.1	.545	.708
40.0	.550	.656

TRANSMITTANCE AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.050 MICROMETER LOCATED ON CENTER ROD

TRIAL NUMBER....02 (DPI-005)  
DATE OF TRIAL...29 SEP 1974  
FUNCTION TIME...1434530  
INCOINACT.....JUST/OEAPTS

SECTION 5  
F211  
FUNCTION

TRANSMITTANCE  
(1.060)

CLOUD LUMINANCE  
MICROWATTS/CM<sup>2</sup> 2/82/94

39.9	.753	.623
41.9	.576	.583
42.4	.517	.524
43.3	.750	.570
44.4	.404	.290
45.3	.425	.242
46.2	.432	.204
47.7	.356	.050
48.2	.485	.105
49.2	.246	.044
50.2	.201	.073
51.2	1.025	.000
52.4	.363	.011
53.2	1.022	.000
54.2	1.055	.000
55.2	.377	.024
56.2	1.036	.000
57.4	.389	.000
58.5	.223	.036
59.8	.094	.000
60.4	.070	.000
61.5	.047	.003
62.5	.965	.025
63.7	1.053	.000
64.7	1.004	.000
65.5	.475	.043
66.7	.444	.000
67.5	1.020	.000
68.6	1.015	.000
69.5	.394	.000
70.5	.463	.000
71.4	1.017	.000
72.5	1.032	.000
73.4	1.039	.000
74.5	.444	.000
75.3	.368	.000
76.5	1.001	.000
77.5	1.026	.000
78.4	1.081	.000
79.4	1.048	.000
80.3	.998	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
RAZELBORN 1.000 MICROMETER LOCATED ON CENTER ROW

TOTAL NUMBER....02 (001-105)  
DATE OF TRIAL...29 SEP 1978  
EJECTION TIME...14105130  
DISCOSACT.....JUST/DE 14.3

SECONDS FROM EJECTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/SEC/ND
41.5	1.009	.000
42.5	.960	.014
43.5	.942	.017
44.5	1.043	.000
45.5	.934	.040
46.4	.937	.037
47.5	.930	.015
48.5	1.027	.000
49.4	.977	.000
50.5	1.055	.000
51.5	1.032	.000
52.5	.934	.024
53.4	1.065	.000
54.4	.982	.000
55.4	.968	.000
56.5	.998	.000
57.5	.960	.000
58.6	.972	.000
59.5	.984	.000
100.4	1.046	.000
101.5	.951	.000
102.6	.975	.000
103.4	.982	.029
104.5	.979	.000
105.6	1.020	.000
106.6	.979	.000
107.7	.977	.000
108.5	.991	.000
109.6	.965	.000
110.6	1.126	.000
111.7	.953	.021
112.6	.915	.059
113.4	.946	.012
114.5	.942	.033
115.2	.942	.048
116.0	.930	.060
117.0	.925	.065
117.9	1.006	.000
118.7	1.027	.000
119.5	1.074	.000
120.5	.854	.120

EXPERIMENTAL AND CLOUD LUMINANCE FOR  
MICROWAVE 1.000 MICROMETER LOCATED ON CENTER 401

1273L 100444...02 (001-005)  
1015 15 1013L...02 SEP 1973  
1017170 TIME...101715:50  
1490 19157...00157064218

RECTIONS  
FROM  
FUNCTION

EXPERIMENTAL  
(1.000)

CLOUD LUMINANCE  
MICROWATTS/CENTIMETER/GRAM

121.4	.991	.000
122.3	.955	.018
123.1	.909	.075
124.1	1.006	.000
124.4	.980	.029
125.7	.927	.047
125.6	.932	.048
127.5	1.001	.000
124.3	.965	.025
125.2	.906	.000
130.2	.984	.021
131.1	.925	.055
131.9	.947	.071
132.3	1.034	.000
133.7	.934	.040
134.7	.944	.000
135.4	.932	.042
136.4	1.046	.000
137.3	.951	.004
134.2	.944	.000
139.0	.972	.018
139.4	.965	.009
140.9	.937	.053
141.6	.909	.195
142.5	.982	.000
143.5	.925	.033
144.4	1.020	.000
145.3	.982	.000
146.2	.991	.000
147.2	.915	.043
148.1	1.010	.000
149.0	1.020	.002
149.4	1.015	.005
150.8	.984	.006
151.6	1.003	.000
152.4	1.006	.000
153.4	1.008	.000
154.4	.984	.000
155.4	1.124	.000
156.3	.894	.111
157.2	1.017	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
SAMPLE WITH 1.000 MICROPIETER LOCATED ON CENTER ROD

TRIAL NUMBER....22 (DPI-005)  
DATE OF TRIAL...29 SEP 1974  
EXPIRATION TIME...14105130  
OBSERVANT.....JST/DEWIS

SECTION FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NO
158.1	1.008	.000
159.0	.979	.010
159.4	.915	.074
160.7	.949	.026
161.7	1.022	.000
162.5	.925	.040
163.5	.968	.022
164.2	.915	.043
165.3	.908	.050
165.7	.963	.011
167.1	.965	.025
167.3	1.020	.000
168.7	1.034	.000
169.5	1.105	.000
170.5	.925	.065
171.2	.934	.055
172.2	1.001	.000
173.2	.920	.069
174.1	1.032	.000

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....02 (DPI-005)  
 DATE OF TRIAL...29 SEP 1974  
 FUNCTION TIME...14:45:30  
 DISCLOSURE.....JUST/DEHRS

SECONDS WAVELENGTH WAVELENGTH  
 FRJ4 3.444/CENTER 9.750/CENTER  
 FUNCTION

1.0	.935	1.055
2.0	1.120	1.192
3.0	1.050	1.040
4.0	.997	1.028
5.0	1.082	1.126
6.0	1.002	1.051
7.0	.918	.992
8.0	.978	.959
9.0	.851	.918
10.0	.782	.796
11.0	.708	.768
12.0	.573	.703
13.0	.612	.685
14.0	.496	.810
15.0	.518	.732
16.0	.454	.655
17.0	.548	.731
18.0	.400	.509
19.0	.214	.395
20.0	.259	.489
21.0	.316	.584
22.0	.364	.610
23.0	.428	.681
24.0	.545	.773
25.0	.542	.791
26.0	.564	.786
27.0	.419	.681
28.0	.475	.744
29.0	.532	.695
30.0	.553	.687
31.0	.447	.615
32.0	.404	.582
33.0	.474	.729
34.0	.472	.660
35.0	.486	.775
36.0	.573	.812
37.0	.593	.908
38.0	.677	.726
39.0	.600	.829
40.0	.608	.862
41.0	.713	.849

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....22 (OPI-005)  
 DATE OF TRIAL...29 SEP 1974  
 EXCITATION TIME...14:45:30  
 OBSERVANT.....JST/DEBRS

SECONDS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 5.443/CENTER 9.750/CENTER

42.0	.643	.780
43.0	.702	.829
44.0	.808	1.115
45.0	.916	1.102
46.0	.844	.912
47.0	.970	1.073
48.0	.943	1.145
49.0	.904	.997
50.0	.956	1.175
51.0	.981	1.035
52.0	.973	1.116
53.0	1.011	1.051
54.0	1.081	1.197
55.0	.954	1.125
56.0	.954	.984
57.0	.995	1.194
58.0	1.005	1.016
59.0	.926	1.171
60.0	1.102	1.121
61.0	1.034	1.158
62.0	.948	1.215
63.0	1.056	1.134
64.0	1.047	1.083
65.0	.954	1.047
66.0	1.125	.980
67.0	.939	1.058
68.0	1.054	1.060
69.0	.998	1.122
70.0	1.017	1.113
71.0	.913	1.197
72.0	1.090	1.221
73.0	1.141	1.267
74.0	.949	1.176
75.0	.965	1.201
76.0	1.004	1.105
77.0	1.101	1.031
78.0	.946	1.044
79.0	.904	1.141
80.0	.983	1.273
81.0	1.055	1.147
82.0	1.115	1.253

TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....32 (0P1-005)  
 DATE OF TRIAL....29 SEP 1979  
 FUNCTION TIME...14:45:30  
 OBSERVANT.....JUST/DEHRIS

SECONDS      WAVELENGTH      WAVELENGTH  
 8214      3.443/CENTER      9.750/CENTER  
 FUNCTION

83.0	1.015	1.253
84.0	.866	1.299
85.0	.962	1.222
86.0	1.082	1.291
87.0	.993	1.082
88.0	1.006	1.263
89.0	.998	1.298
90.0	.974	1.275
91.0	.971	1.230
92.0	.971	1.267
93.0	.931	1.267
94.0	.943	1.373
95.0	.943	1.220
96.0	.975	1.118
97.0	.947	1.138
98.0	1.117	1.251
99.0	1.008	.995
100.0	.986	1.094
101.0	.986	1.178
102.0	.984	1.157
103.0	.971	1.143
104.0	1.001	1.180
105.0	1.052	1.191
106.0	.976	1.126
107.0	.935	.997
108.0	.938	1.162
109.0	1.048	1.181
110.0	.983	1.196
111.0	.975	1.257
112.0	.942	1.124
113.0	.975	1.177
114.0	.897	1.056
115.0	1.000	1.169
116.0	.986	1.016
117.0	.983	1.124
118.0	1.056	1.091
119.0	.922	1.166
120.0	.925	1.040
121.0	1.040	1.075
122.0	.983	1.193
123.0	1.071	1.081



# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....32 (OPI-005)  
 DATE OF TRIAL...29 SEP 1978  
 FUNCTION TIME...14:45:30  
 OBSCURANT.....JUST/DEHRIS

SECONDS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 3.443/CENTER 9.750/CENTER

124.0	1.027	.999
125.0	1.014	1.329
126.0	1.059	1.277
127.0	1.056	.841
128.0	.932	1.103
129.0	1.094	1.055
130.0	.933	1.061
131.0	1.027	1.016
132.0	.976	1.082
133.0	.973	1.164
134.0	.995	1.147
135.0	1.027	1.097
136.0	1.049	1.036
137.0	.956	1.173
138.0	1.044	1.108
139.0	.936	1.130
140.0	1.048	1.027
141.0	1.079	1.152
142.0	.970	1.112
143.0	1.008	1.128
144.0	.966	1.074
145.0	.995	1.197
146.0	.963	1.089
147.0	.998	1.096
148.0	.987	1.142
149.0	.920	1.279
150.0	1.149	1.237
151.0	1.104	1.225
152.0	.911	1.113
153.0	1.016	1.160
154.0	.982	1.249
155.0	.887	1.175
156.0	.994	1.417
157.0	1.035	1.336
158.0	1.077	1.230
159.0	1.044	1.237
160.0	.965	1.151
161.0	.927	1.279
162.0	1.076	1.244
163.0	1.137	1.078
164.0	.972	1.253

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....02 (OP1-005)  
 DATE OF TRIAL...29 SEP 1978  
 FUNCTION TIME...14145130  
 OBSERVANT.....JST/DEBRIS

SEC 0008 WAVELENGTH WAVELENGTH  
 8200 3.445/CENTER 9.750/CENTER  
 FUNCTION

165.0	.945	1.225
166.0	1.004	1.470
167.0	1.101	1.444
168.0	1.055	1.545
169.0	1.115	1.425
170.0	1.109	1.302
171.0	1.034	1.446
172.0	1.126	1.213
173.0	1.059	1.457
174.0	.986	1.377

CL VALUES (CM/4442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....22 (001-005)  
DATE OF TRIAL...29 SEP 1974  
FUNCTION TIME...14:45:30  
UNSECURANT.....JUST/DEHRIS

SECONDS 62.34 FUNCTION	CENTER
1.0	.25601
2.0	.00000
3.0	.00000
4.0	.01077
5.0	.00000
6.0	.00000
7.0	.32215
8.0	.08505
9.0	.60864
10.0	.92926
11.0	1.30672
12.0	2.10365
13.0	1.56005
14.0	2.65048
15.0	2.48503
16.0	2.98381
17.0	2.27624
18.0	5.47017
19.0	5.82497
20.0	5.10362
21.0	4.36167
22.0	5.82023
23.0	3.21056
24.0	2.29787
25.0	2.31458
26.0	2.16455
27.0	5.28770
28.0	2.81988
29.0	2.38727
30.0	2.24420
31.0	3.04493
32.0	3.42977
33.0	2.82384
34.0	2.83598
35.0	2.73116
36.0	2.10816
37.0	1.97633
38.0	1.47351
39.0	1.22936
40.0	1.87962
41.0	1.27751

CL VALUES (CONVERTED) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER...02 (001-005)  
DATE OF TRIAL...29 SEP 1978  
RUNNING TIME...14:45:50  
INSTRUMENT.....JUS70E4R18

SECTION E400 FUNCTION	CENTER
42.0	1.67223
43.0	1.50054
44.0	.80678
45.0	.55347
46.0	.64291
47.0	.11707
48.0	.22113
49.0	.58028
50.0	.16449
51.0	.07290
52.0	.10208
53.0	.00000
54.0	.00000
55.0	.17970
56.0	.17426
57.0	.01915
58.0	.00000
59.0	.28400
60.0	.00000
61.0	.00000
62.0	.20056
63.0	.00000
64.0	.00000
65.0	.17786
66.0	.00000
67.0	.23888
68.0	.00000
69.0	.00945
70.0	.00000
71.0	.34482
72.0	.00000
73.0	.00000
74.0	.19993
75.0	.13508
76.0	.00000
77.0	.00000
78.0	.20850
79.0	.38071
80.0	.06342
81.0	.00000
82.0	.00000

CL VALUES (4475442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....02 (001-005)  
DATE OF TRIAL...29 SEP 1975  
FUNCTION TIME...14:45:30  
ANALYST.....JOST/DENNIS

SECTION	FUNCTION	CENTER
83.0	.00000	
84.0	.54229	
85.0	.14595	
86.0	.00000	
87.0	.02727	
88.0	.00000	
89.0	.00731	
90.0	.09922	
91.0	.11189	
92.0	.11210	
93.0	.27220	
94.0	.22201	
95.0	.22113	
96.0	.09506	
97.0	.20509	
98.0	.00000	
99.0	.00000	
100.0	.12915	
101.0	.05167	
102.0	.06148	
103.0	.11030	
104.0	.00000	
105.0	.00000	
106.0	.09065	
107.0	.25623	
108.0	.24096	
109.0	.00000	
110.0	.06401	
111.0	.09450	
112.0	.22475	
113.0	.09423	
114.0	.41075	
115.0	.00041	
116.0	.05269	
117.0	.06379	
118.0	.00000	
119.0	.30876	
120.0	.24548	
121.0	.00000	
122.0	.06451	
123.0	.00000	

CL VALUES (CM/VX=2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....02 (001-005)  
DATE OF TRIAL...29 SEP 1975  
EXPOSITION TIME...14:15:30  
OBSERVER.....JOST/DEHRIS

SECONDS FROM EXPOSITION	CENTER
124.0	.00000
125.0	.00000
126.0	.00000
127.0	.00000
128.0	.26787
129.0	.00000
130.0	.26406
131.0	.00000
132.0	.04204
133.0	.10414
134.0	.01415
135.0	.00000
136.0	.00000
137.0	.17063
138.0	.00000
139.0	.25123
140.0	.00000
141.0	.00000
142.0	.11461
143.0	.00000
144.0	.13054
145.0	.01971
146.0	.14089
147.0	.00888
148.0	.00487
149.0	.31566
150.0	.00000
151.0	.00000
152.0	.35071
153.0	.00000
154.0	.07005
155.0	.45543
156.0	.02204
157.0	.00000
158.0	.00000
159.0	.00000
160.0	.05903
161.0	.28777
162.0	.00000
163.0	.00000
164.0	.10834

CL VALUES (G4/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....02 (OP1-005)  
DATE OF TRIAL...29 SEP 1978  
FUNCTION TIME...14:45:30  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
165.0	.21547
166.0	.00000
167.0	.00000
168.0	.00000
169.0	.00000
170.0	.00000
171.0	.00000
172.0	.00000
173.0	.00000
174.0	.05489

APPENDIX F. SECTION 3

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TRIAL: E1 , DPG DUST ADD-ON

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F-3-17	TABLE: LUMINANCE FOR WAVELENGTH 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-3-24	TABLE: TRANSMITTANCE AND CLOUD LUMINANCE FOR WAVELENGTH 1.060 $\mu\text{m}$ LOCATED ON CENTER ROW
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TRIAL E1, DPG DUST ADD-ON, 25 SEP 1975, 13:55:10, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSSAGE (GM./MIN/4**3)
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.00010
2	15.00	.00	1.50	.00525
3	30.00	.00	1.50	.02353
4	45.00	.00	1.50	.01130
5	60.00	.00	1.50	.01865
6	75.00	.00	1.50	.01600
7	90.00	.00	1.50	.03042
8	105.00	.00	1.50	.01565
9	120.00	.00	1.50	.03408
10	135.00	.00	1.50	.00477
11	150.00	.00	1.50	.00365
12	165.00	.00	1.50	.00393
13	180.00	.00	1.50	.00073
14	195.00	.00	1.50	.00017
15	210.00	.00	1.50	.00289

DOSSAGE ALONG SIGHT LINE# 2.76750 (GM./MIN/4\*\*2)

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW O

TRIAL E1; DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

.90	.993
1.80	1.139
2.69	1.043
3.56	.985
4.43	.955
5.31	1.113
6.23	.915
7.24	.881
8.23	.975
9.21	1.034
10.19	.954
11.15	.999
12.08	.999
13.07	.994
14.04	1.073
15.01	1.140
15.98	.932
16.96	.989
17.94	1.007
18.95	.962
19.93	1.010
20.89	1.023
21.84	1.004
22.80	1.044
23.78	1.002
24.76	1.074
25.72	1.085
26.67	1.005
27.65	1.126
28.61	.939
29.58	.853
30.55	.527
31.51	.287
32.48	.199
33.45	.302
34.41	.264
35.38	.163
36.36	.073
37.34	.063
38.31	.046

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

39.29	.050
40.20	.024
41.23	.053
42.21	.050
43.20	.056
44.17	.071
45.15	.109
46.13	.072
47.08	.058
48.04	.054
48.93	.049
49.96	.070
50.93	.073
51.89	.129
52.85	.137
53.81	.202
54.78	.204
55.76	.191
56.74	.257
57.71	.248
58.68	.247
59.65	.268
60.62	.292
61.60	.312
62.57	.246
63.54	.264
64.51	.235
65.49	.270
66.48	.237
67.48	.245
68.43	.268
69.42	.293
70.40	.292
71.40	.302
72.39	.364
73.36	.366
74.33	.359
75.30	.379
76.28	.468
77.26	.443

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

78.22	.501
79.19	.392
81.13	.496
82.11	.617
83.09	.612
84.07	.658
85.05	.688
86.04	.775
87.02	.726
88.00	.805
88.96	.890
89.91	.798
90.87	.707
91.80	.772
92.80	.842
93.77	.783
94.72	.844
95.70	.836
96.67	.869
97.62	.801
98.58	.811
99.53	.932
100.48	.916
101.45	.881
102.41	.879
103.38	.865
104.34	.948
105.29	1.003
106.25	.982
107.21	.967
108.16	.798
109.11	.880
110.05	.885
111.01	.835
111.98	.816
112.95	.999
113.92	.958
114.89	.930
115.87	.905
116.85	.911

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

117.83	.901
118.80	.905
119.76	1.039
120.72	.967
121.69	1.026
122.66	1.099
123.62	.882
124.57	.976
125.52	.906
126.46	.988
127.40	.970
128.36	.959
129.31	1.029
130.25	.990
131.21	.926
132.18	.963
133.15	.990
134.11	.923
135.07	.945
136.04	.956
137.01	1.020
137.96	1.043
138.94	1.027
139.91	1.082
140.88	1.046
141.85	.985
142.80	.996
143.76	1.059
144.71	1.035
145.67	.998
146.64	1.049
147.61	.994
148.59	.977
149.57	1.162
150.52	.978
151.50	.986
152.45	1.000
153.42	.973
154.39	.971
155.36	1.054

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL E1, DPG DUE ADDON

DATE: 25 SEP 1970

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

156.33	1.045
157.30	1.034
158.27	.981
159.21	1.091
160.18	.944
161.14	1.013
162.10	.996
163.05	1.026
163.99	.980
164.93	.984
165.88	.979
166.82	1.143
167.75	1.093
168.69	1.037
169.64	1.051
170.58	1.092
171.53	1.043
172.49	.979
173.46	1.018
174.44	.994
175.42	1.081
176.40	1.140
177.36	1.035
178.33	.989
179.30	.955
180.27	1.051
181.25	.977
182.22	.982
183.17	.992
184.13	1.111
185.08	1.078
186.03	.917
186.98	.961
187.92	.987
188.87	.996
189.82	1.106
190.77	.954
191.73	1.073
192.70	.972
193.67	1.044

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

194.64	1.041
195.61	.976
196.58	.961
197.54	.919
198.51	1.051
199.48	.910
200.43	1.047
201.38	.930
202.34	.907
203.31	1.047
204.29	1.032
205.24	1.008
206.20	.997
207.16	1.066
208.10	.993
209.05	.982
210.00	.916
210.94	.949
211.90	.984
212.85	1.022
213.81	1.025
214.76	1.058
215.71	1.012
216.66	1.013
217.60	.976
218.53	.969
219.47	1.071
220.40	1.039
221.35	1.034
222.29	1.043
223.15	1.048
224.01	.999
224.86	1.108
225.72	.988
226.57	.946
227.43	1.004
228.29	.969
229.15	1.031
230.00	1.020
230.85	1.037

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

231.71	1.025
232.58	.984
233.46	.960
234.33	.954
235.20	1.109
236.08	1.038
236.95	.934
237.81	.979
238.69	.906
239.56	1.011
240.43	.952
241.31	1.030
242.19	1.063
243.07	1.030
243.94	1.105
244.82	.971
245.69	.978
246.59	.976
247.46	.963
248.34	1.100
249.21	1.006
250.08	1.099
250.96	1.026
251.83	.984
252.72	1.126
253.59	1.064
254.47	1.004



CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

.90	-.325
1.80	-.334
2.69	-.328
3.56	-.324
4.43	-.322
5.31	-.332
6.23	-.320
7.24	-.317
8.23	-.324
9.21	-.327
10.19	-.322
11.15	-.325
12.08	-.325
13.07	-.325
14.04	-.330
15.01	-.334
15.98	-.320
16.96	-.324
17.94	-.325
18.95	-.321
19.93	-.325
20.89	-.324
21.84	-.319
22.80	-.324
23.78	-.301
24.76	-.295
25.72	-.238
26.67	-.211
27.65	-.299
28.61	-.320
29.58	-.310
30.55	-.292
31.51	-.218
32.48	-.181
33.45	-.223
34.41	-.209
35.38	-.161
36.36	-.093
37.34	-.083
38.31	-.064

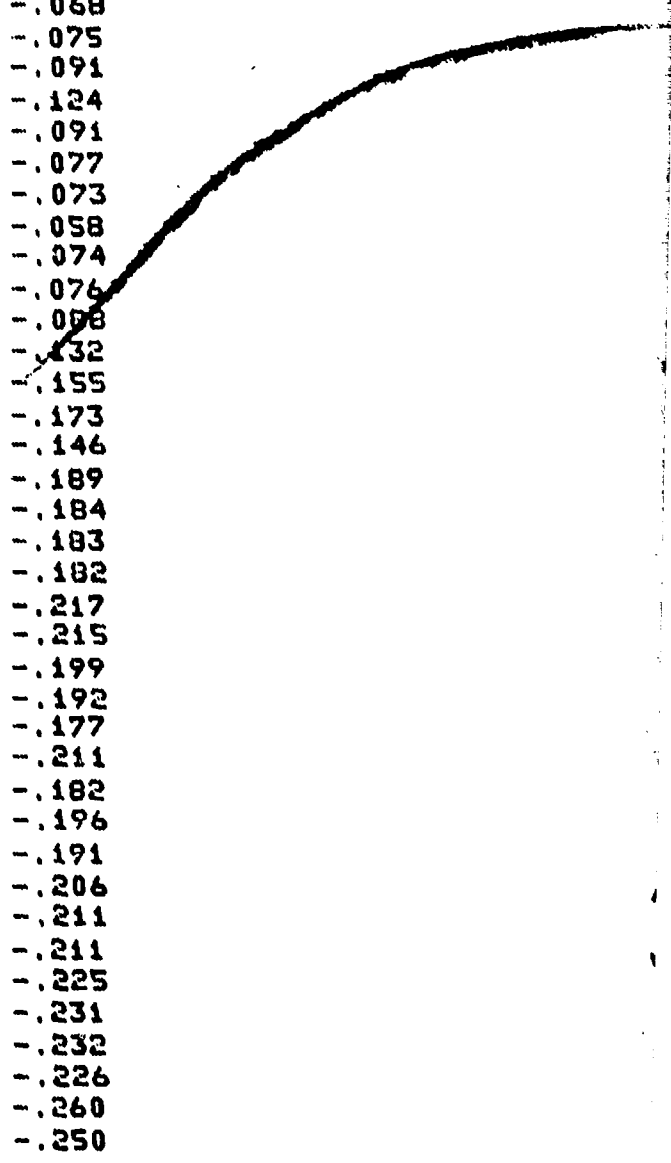
CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

39.29	-.068
40.20	-.036
41.23	-.072
42.21	-.068
43.20	-.075
44.17	-.091
45.15	-.124
46.13	-.091
47.08	-.077
48.04	-.073
48.93	-.058
49.96	-.074
50.93	-.076
51.89	-.068
52.85	-.132
53.81	-.155
54.78	-.173
55.76	-.146
56.74	-.189
57.71	-.184
58.68	-.183
59.65	-.182
60.62	-.217
61.60	-.215
62.57	-.199
63.54	-.192
64.51	-.177
65.49	-.211
66.48	-.182
67.48	-.196
68.43	-.191
69.42	-.206
70.40	-.211
71.40	-.211
72.39	-.225
73.36	-.231
74.33	-.232
75.30	-.226
76.28	-.260
77.26	-.250



CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

78.22	-.266
79.19	-.243
81.13	-.265
82.41	-.289
83.09	-.287
84.07	-.294
85.05	-.298
86.04	-.307
87.02	-.302
88.00	-.296
88.96	-.313
89.91	-.297
90.87	-.290
91.80	-.304
92.80	-.311
93.77	-.302
94.72	-.309
95.70	-.308
96.67	-.316
97.62	-.309
98.58	-.308
99.53	-.320
100.48	-.319
101.45	-.315
102.41	-.316
103.38	-.314
104.34	-.320
105.29	-.325
106.25	-.324
107.21	-.323
108.16	-.309
109.11	-.317
110.05	-.317
111.01	-.313
111.98	-.307
112.95	-.322
113.92	-.319
114.89	-.318
115.87	-.319
116.85	-.317

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

117.83	-.317
118.80	-.317
119.76	-.325
120.72	-.323
121.69	-.326
122.66	-.331
123.62	-.316
124.57	-.324
125.52	-.317
126.46	-.323
127.40	-.323
128.36	-.320
129.31	-.325
130.25	-.323
131.21	-.320
132.18	-.323
133.15	-.325
134.11	-.320
135.07	-.322
136.04	-.322
137.01	-.327
137.96	-.328
138.94	-.327
139.91	-.330
140.88	-.328
141.85	-.324
142.80	-.325
143.76	-.329
144.71	-.327
145.67	-.325
146.64	-.328
147.61	-.324
148.59	-.324
149.57	-.335
150.52	-.324
151.50	-.324
152.45	-.325
153.42	-.324
154.37	-.323
155.36	-.329

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION (SECONDS)	CONTRAST RATIO (0.4-0.7)
156.33	-.328
157.30	-.327
158.27	-.324
159.21	-.331
160.18	-.322
161.14	-.326
162.10	-.325
163.05	-.327
163.99	-.324
164.93	-.324
165.88	-.323
166.82	-.333
167.75	-.330
168.69	-.328
169.64	-.328
170.58	-.330
171.53	-.328
172.49	-.324
173.46	-.327
174.44	-.325
175.42	-.329
176.40	-.327
177.36	-.327
178.33	-.322
179.30	-.316
180.27	-.327
181.25	-.324
182.22	-.324
183.17	-.325
184.13	-.332
185.08	-.330
186.03	-.320
186.98	-.322
187.92	-.324
188.87	-.324
189.82	-.331
190.77	-.321
191.73	-.330
192.70	-.323
193.67	-.328

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

194.64	-.328
195.61	-.323
196.58	-.323
197.54	-.320
198.51	-.328
199.48	-.319
200.43	-.328
201.38	-.321
202.34	-.319
203.31	-.328
204.29	-.327
205.24	-.326
206.20	-.325
207.16	-.329
208.10	-.325
209.05	-.324
210.00	-.319
210.94	-.322
211.90	-.324
212.85	-.326
213.81	-.326
214.76	-.328
215.71	-.326
216.66	-.326
217.60	-.324
218.53	-.322
219.47	-.328
220.40	-.325
221.35	-.328
222.29	-.328
223.15	-.328
224.01	-.325
224.86	-.331
225.72	-.324
226.57	-.322
227.43	-.326
228.29	-.323
229.15	-.327
230.06	-.327
230.85	-.327

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 25 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:53

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

231.71	-.326
232.58	-.324
233.46	-.322
234.33	-.322
235.20	-.332
236.08	-.328
236.95	-.320
237.81	-.324
238.69	-.318
239.56	-.326
240.43	-.322
241.31	-.327
242.19	-.329
243.07	-.327

END OF PROGRAM

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
 DATE: 25 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
 (SECONDS)

LUMINANCE  
 (FOOTLAMBERTS)

1.00	.000
2.00	.000
3.00	.000
4.00	.000
5.00	.000
6.00	.000
7.00	.000
8.00	.000
9.00	.000
10.00	2.116
11.00	.000
12.00	.000
13.00	.916
14.00	.000
15.00	2.441
16.00	6.241
17.00	3.291
18.00	5.641
19.00	13.503
20.00	19.166
21.00	30.791
22.00	58.641
23.00	78.503
24.00	202.103
25.00	397.853
26.00	1085.416
27.00	2059.703
28.00	2285.615
29.00	2293.878
30.00	2319.090
31.00	2319.090
32.00	2319.090
33.00	2319.090
34.00	2319.090
35.00	2319.090
36.00	2319.090
37.00	2319.090
38.00	2319.090
39.00	2319.090
40.00	2319.090



LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
 DATE: 25 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
 (SECONDS)

LUMINANCE  
 (FOOTLAMBERTS)

41.00	2319.090
42.00	2319.090
43.00	2319.090
44.00	2319.090
45.00	2319.090
46.00	2319.090
47.00	2319.090
48.00	2319.090
49.00	2269.578
50.00	2205.240
51.00	2274.890
52.00	2042.091
53.00	2000.666
54.00	2093.678
55.00	2062.990
56.00	1948.120
57.00	1888.541
58.00	1820.791
59.00	1893.816
60.00	2014.566
61.00	2003.566
62.00	2048.653
63.00	2062.315
64.00	1980.903
65.00	1877.666
66.00	1883.553
67.00	1794.865
68.00	1764.416
69.00	1648.591
70.00	1566.566
71.00	1616.253
72.00	1544.466
73.00	1434.716
74.00	1357.603
75.00	1298.728
76.00	1131.628
77.00	1079.191
78.00	972.666
79.00	904.391
80.00	827.341

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW O

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

81.00	763.101
82.00	648.503
83.00	627.303
84.00	560.216
85.00	535.803
86.00	484.366
87.00	423.190
88.00	372.128
89.00	355.891
90.00	309.141
91.00	270.141
92.00	256.991
93.00	267.141
94.00	239.091
95.00	215.453
96.00	192.716
97.00	190.703
98.00	186.253
99.00	168.916
100.00	173.278
101.00	175.516
102.00	190.666
103.00	182.378
104.00	171.565
105.00	155.916
106.00	144.153
107.00	136.516
108.00	126.003
109.00	99.478
110.00	92.416
111.00	80.466
112.00	64.591
113.00	52.978
114.00	38.491
115.00	27.440
116.00	27.241
117.00	18.803
118.00	14.341
119.00	22.291
120.00	9.741

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON  
DATE: 35 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	13.291
122.00	7.741
123.00	12.516
124.00	5.166
125.00	6.503
126.00	15.716
127.00	26.953
128.00	27.391
129.00	55.603
130.00	26.378
131.00	7.066
132.00	.000
133.00	.000
134.00	.000
135.00	.000
136.00	.000
137.00	.000
138.00	1.816
139.00	.000
140.00	1.878
141.00	.416
142.00	2.178
143.00	.000
144.00	1.391
145.00	.000
146.00	.028
147.00	.000
148.00	3.566
149.00	1.166
150.00	.041
151.00	.000
152.00	.253
153.00	.000
154.00	.000
155.00	.341
156.00	.000
157.00	.841
158.00	4.016
159.00	.000
160.00	.053

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	.000
162.00	2.316
163.00	.000
164.00	.116
165.00	.941
166.00	3.316
167.00	4.853
168.00	.878
169.00	.178
170.00	3.166
171.00	.000
172.00	1.866
173.00	.000
174.00	.000
175.00	.000
176.00	8.966
177.00	78.678
178.00	69.538
179.00	105.878
180.00	29.116
181.00	6.541
182.00	.803
183.00	1.341
184.00	2.103
185.00	3.278
186.00	6.291
187.00	3.903
188.00	.203
189.00	3.466
190.00	7.691
191.00	.641
192.00	.000
193.00	1.366
194.00	3.466
195.00	4.128
196.00	.000
197.00	.000
198.00	1.041
199.00	5.191
200.00	2.041

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW D

TRIAL E1, DPG D'IST ADDON  
 DATE: 25 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
 (SECONDS)

LUMINANCE  
 (FOOTLAMBERTS)

201.00	.000
202.00	.091
203.00	.653
204.00	2.503
205.00	6.103
206.00	1.316
207.00	5.341
208.00	2.928
209.00	3.441
210.00	1.578
211.00	1.378
212.00	.000
213.00	2.216
214.00	6.628
215.00	.000
216.00	.916
217.00	1.841
218.00	3.041
219.00	11.878
220.00	24.253
221.00	1.953
222.00	2.666
223.00	8.078
224.00	3.103
225.00	7.028
226.00	5.653
227.00	4.378
228.00	4.878
229.00	5.591
230.00	3.803
231.00	7.341
232.00	2.353
233.00	1.378
234.00	6.378
235.00	3.078
236.00	2.666
237.00	.753
238.00	.166
239.00	2.216
240.00	.428

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL E1, DPG DUST ADDON

DATE: 25 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:54:55

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

241.00	4.778
242.00	.000
243.00	.000
244.00	1.666
245.00	1.816
246.00	.000
247.00	.000
248.00	2.066
249.00	.866
250.00	.566
251.00	4.151
252.00	3.728
253.00	.991
254.00	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER 40A

TRIAL NUMBER....31 (OP1-005)  
DATE OF TRIAL...25 SEP 1978  
FUNCTION TIME...13874355  
OBSERVANT.....JST/DEHRS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/MM
.9	1.062	.000
1.9	.955	.000
2.7	1.020	.000
3.5	1.000	.000
4.5	1.044	.003
5.4	.997	.040
6.2	.991	.000
7.4	1.020	.000
8.3	1.092	.000
9.2	.907	.060
10.2	1.154	.000
11.1	.946	.040
12.1	1.008	.000
13.1	1.003	.000
14.1	1.110	.000
15.1	1.163	.000
16.0	.922	.024
17.1	1.000	.000
18.1	.997	.000
19.1	1.083	.000
20.0	1.077	.000
20.9	.967	.000
21.9	1.023	.000
22.9	1.038	.000
23.9	1.080	.000
24.7	.976	.016
25.7	1.110	.000
26.7	1.000	.000
27.7	1.038	.000
28.7	.946	.080
29.7	.901	.209
30.4	.574	.632
31.8	.259	1.027
32.6	.292	1.034
33.4	.381	1.001
34.3	.256	1.233
35.3	.143	1.452
36.5	.086	1.608
37.4	.062	1.697
38.8	.048	1.745
39.2	.051	1.726

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER HON

TRIAL NUMBER....21 (001-005)  
DATE OF TRIAL...25 SEP 1974  
FUNCTION TIME...13:54:55  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/54/PM
40.4	.018	1.752
41.3	.065	1.704
42.3	.057	1.719
43.0	.051	1.710
44.1	.068	1.657
45.1	.118	1.606
46.2	.074	1.637
47.1	.057	1.657
47.9	.045	1.654
48.9	.048	1.620
50.1	.083	1.533
51.0	.065	1.506
52.0	.143	1.374
52.7	.131	1.356
53.9	.196	1.283
54.9	.232	1.260
55.7	.196	1.294
56.9	.262	1.227
57.8	.244	1.246
58.7	.229	1.276
59.7	.241	1.297
60.7	.303	1.228
61.7	.303	1.212
62.5	.280	1.238
63.7	.253	1.293
64.5	.232	1.322
65.4	.268	1.293
66.6	.232	1.306
67.6	.253	1.268
68.5	.253	1.252
69.5	.280	1.207
70.5	.283	1.188
71.8	.333	1.117
72.4	.342	1.107
73.5	.354	1.047
74.4	.372	.996
75.3	.384	.957
76.3	.440	.844
77.4	.428	.996
78.3	.455	.857
79.3	.431	.852



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....E1 (0P1-015)  
DATE OF TRIAL...25 SEP 1974  
FUNCTION TIME...13:54:55  
UNSECURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICRONATTS/CM**2/SR/MM
80.1	.566	.650
81.2	.625	.591
82.2	.586	.614
83.1	.545	.577
84.0	.613	.542
85.2	.641	.466
86.1	.702	.459
87.0	.824	.340
88.1	.880	.351
89.0	.324	.340
89.9	.765	.390
90.3	.845	.270
91.3	.363	.250
92.4	.762	.300
93.3	.910	.120
94.8	.875	.153
95.7	.861	.152
96.7	.806	.256
97.5	.815	.240
98.7	.928	.147
99.6	.797	.291
100.5	.866	.169
101.5	1.029	.000
102.5	.872	.115
103.3	.866	.099
104.4	.395	.105
105.4	.952	.042
106.3	.991	.015
107.2	.863	.157
108.2	.869	.165
109.2	.946	.080
110.0	.901	.129
111.1	.898	.144
112.1	.937	.090
113.0	.961	.064
114.0	.910	.073
115.0	.955	.004
116.0	.919	.053
117.0	.946	.049
117.7	.904	.111
118.9	.997	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER...51 (DPI-005)  
DATE OF TRIAL...25 SEP 1978  
FUNCTION TIME...13:54:55  
OBSERVANT.....JUST/DEHRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
119.9	1.000	.000
120.7	1.017	.000
121.4	1.071	.000
122.7	1.023	.000
123.7	.973	.004
124.6	.958	.020
125.5	1.071	.000
126.3	.991	.000
127.4	.994	.000
128.4	.989	.019
129.4	.967	.057
130.3	.988	.019
131.2	.955	.055
132.3	1.017	.000
133.2	.988	.003
134.2	.982	.000
135.2	1.065	.000
136.1	.991	.000
137.1	1.098	.000
138.0	1.038	.000
139.0	1.083	.000
139.9	1.017	.000
141.0	1.026	.000
141.9	.925	.072
142.9	1.003	.000
143.4	1.080	.000
144.8	1.029	.000
145.7	1.089	.000
146.7	1.086	.000
147.7	1.089	.000
148.6	1.050	.000
149.6	1.026	.000
150.5	1.066	.000
151.6	1.029	.000
152.6	1.017	.001
153.5	.967	.057
154.5	1.077	.000
155.5	1.119	.000
156.2	1.062	.000
157.4	.973	.000
159.1	.949	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER HORN

TRIAL NUMBER....31 (DP1-005)  
DATE OF TRIAL...25 SEP 1978  
FUNCTION TIME...13:54:45  
OBSERVANT.....JOSI/DEARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/MM
159.2	.970	.000
160.2	1.157	.000
161.2	1.095	.000
162.1	1.003	.000
163.0	1.050	.000
164.0	.985	.022
164.9	1.003	.000
165.9	1.044	.000
166.9	1.038	.000
167.8	.982	.009
168.7	1.098	.000
169.5	1.101	.000
170.6	1.029	.000
171.5	1.029	.000
172.5	1.026	.000
173.5	1.023	.000
174.5	.976	.047
175.5	1.020	.000
176.5	1.122	.000
177.4	1.068	.000
178.4	1.062	.000
179.4	1.068	.000
180.3	1.020	.000
181.4	1.124	.000
182.2	1.032	.000
183.2	1.122	.000
184.1	.925	.048
185.2	.958	.051
186.0	.991	.000
187.0	1.000	.000
188.0	1.059	.000
189.0	1.240	.000
189.9	.997	.000
190.9	1.065	.000
191.7	.958	.005
192.7	1.035	.000
193.7	1.041	.000
194.6	1.047	.000
195.7	1.005	.014
196.6	.988	.019
197.6	1.017	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.000 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....E1 (DPI-005)  
DATE OF TRIAL...25 SEP 1978  
FUNCTION TIME...13:54:55  
OBSERVANT.....JOST/DERRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/MM
198.4	1.000	.000
199.5	1.050	.000
200.5	.964	.000
201.5	1.053	.000
202.4	1.104	.000
203.4	1.157	.000
204.4	1.035	.000
205.3	1.042	.000
206.5	.976	.000
207.2	.955	.023
208.2	1.008	.000
209.1	.934	.031
210.1	1.014	.000
210.5	1.003	.000
212.0	1.080	.000
213.0	1.047	.000
213.3	1.035	.000
214.9	1.020	.000
215.3	1.086	.000
216.7	1.074	.000
217.7	1.017	.000
219.5	1.077	.000
219.5	1.056	.000
220.5	.979	.000
221.4	1.172	.000
222.3	.997	.000
223.1	.991	.052
224.0	1.004	.074
224.9	.976	.047
225.7	1.054	.000
226.5	1.044	.000
227.4	.973	.056
228.3	1.136	.000
229.2	1.005	.046
230.0	.964	.107
230.9	1.008	.011
231.7	.973	.004
232.5	.931	.034
233.5	.970	.054
234.3	.946	.127
235.3	1.011	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED IN CENTER ROW

TRIAL NUMBER....E1 (DP1-005)  
DATE OF TRIAL...25 SEP 1979  
FUNCTION TIME...13:54:55  
OBSERVANT.....JUSI/DEHRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
236.1	.915	.082
236.9	.988	.050
237.9	.976	.125
239.7	.997	.056
239.9	1.092	.000
240.5	1.071	.000
241.3	1.044	.000
242.2	.937	.028
243.1	1.047	.000
244.0	.982	.056
244.9	.946	.049
245.7	1.035	.000
246.5	1.008	.000
247.5	1.005	.000
248.4	1.003	.033
249.2	.988	.034
250.1	1.205	.000
251.0	.916	.082
251.3	1.047	.000
252.7	.964	.107
253.7	1.053	.000

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER.....51 (DP1-005)  
 DATE OF TRIAL...25 SEP 1978  
 FUNCTIONED TIME...13:54:55  
 OBSERVANT.....DIST/DEPTS

SECTION 3  
 FRTN WAVELENGTH WAVELENGTH  
 FUNCTION 3.443/CENTER 3.750/CENTER

1.0	1.052	1.071
2.0	1.096	1.053
3.0	.996	.959
4.0	1.005	1.105
5.0	1.074	1.088
6.0	1.003	.961
7.0	1.106	1.041
8.0	.985	1.136
9.0	1.005	1.004
10.0	1.143	1.113
11.0	1.020	1.087
12.0	1.087	1.011
13.0	.994	1.131
14.0	.997	1.164
15.0	.932	1.125
16.0	.901	1.160
17.0	.985	1.160
18.0	1.170	1.200
19.0	.924	1.027
20.0	1.021	1.071
21.0	.940	1.170
22.0	1.042	1.023
23.0	.947	1.117
24.0	1.027	1.024
25.0	.987	1.053
26.0	.983	1.010
27.0	1.081	1.091
28.0	.942	1.001
29.0	.934	.939
30.0	.702	.744
31.0	.334	.455
32.0	.326	.480
33.0	.414	.456
34.0	.311	.481
35.0	.173	.373
36.0	.123	.266
37.0	.093	.223
38.0	.090	.239
39.0	.073	.164
40.0	.049	.159
41.0	.098	.280

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER....21 (041-005)  
 DATE OF TEST...25 SEP 1978  
 MEASUREMENT TIME...13:54:55  
 OBSERVER.....JUST/DEBRTS

SECTION  
 F470  
 FUNCTION

WAVELENGTH  
 0.405/CENTER  
 WAVELENGTH  
 0.750/CENTER

42.0	.121	.283
43.0	.113	.321
44.0	.155	.340
45.0	.147	.294
46.0	.127	.271
47.0	.111	.233
48.0	.082	.252
49.0	.127	.302
50.0	.147	.320
51.0	.173	.401
52.0	.250	.442
53.0	.254	.485
54.0	.311	.577
55.0	.323	.523
56.0	.334	.485
57.0	.342	.541
58.0	.300	.520
59.0	.392	.592
60.0	.400	.645
61.0	.402	.610
62.0	.384	.431
63.0	.388	.567
64.0	.368	.532
65.0	.382	.587
66.0	.346	.535
67.0	.371	.571
68.0	.334	.575
69.0	.438	.593
70.0	.456	.712
71.0	.425	.756
72.0	.580	.761
73.0	.484	.746
74.0	.470	.645
75.0	.464	.751
76.0	.517	.771
77.0	.517	.805
78.0	.320	.794
79.0	.563	.889
80.0	.616	.941
81.0	.614	.770
82.0	.612	.850

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL WAGERD....21 (001-005)  
 DATE OF TOTAL...25 SEP 1974  
 FUNCTION TIME...13:54:55  
 OMSC JPM1.....301ST/DETRYS

SECTION  
 F474  
 FUNCTION

WAVELENGTH WAVELENGTH  
 5.443/CENTER 2.750/CENTER

83.0	.570	.880
84.0	.750	.793
85.0	.729	1.010
86.0	.784	.950
87.0	.803	1.134
88.0	.434	.995
89.0	.509	.998
90.0	.738	1.029
91.0	.791	1.074
92.0	.755	1.180
93.0	.845	1.163
94.0	.550	1.204
95.0	.951	1.291
96.0	.877	1.065
97.0	.900	1.227
98.0	.908	1.115
99.0	.553	1.067
100.0	.781	1.076
101.0	.928	1.096
102.0	.885	1.013
103.0	.811	1.235
104.0	.845	1.119
105.0	.883	1.212
106.0	.840	1.134
107.0	.777	1.005
108.0	.836	1.024
109.0	.879	1.171
110.0	.869	1.145
111.0	.895	1.161
112.0	.895	1.052
113.0	.897	1.132
114.0	.958	1.067
115.0	.972	1.205
116.0	.911	1.133
117.0	.798	1.135
118.0	.953	1.149
119.0	.922	1.125
120.0	.941	1.243
121.0	.922	1.131
122.0	1.010	1.037
123.0	.970	1.078



# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....E1 (DP1-005)  
 DATE OF TRIAL...25 SEP 1978  
 FUNCTION TIME...13:54:55  
 OBSERVANT.....DUST/DEBRIS

SCATTER  
 DATA  
 FUNCTION

WAVELENGTH WAVELENGTH  
 0.443/CENTER 0.750/CENTER

120.0	.929	1.075
125.0	1.023	1.062
125.0	1.024	1.065
127.0	.945	1.058
128.0	.983	1.176
129.0	1.101	1.022
130.0	.987	1.102
131.0	.987	1.157
132.0	1.023	1.127
133.0	.997	1.021
134.0	.983	1.011
135.0	.961	.890
136.0	.984	.832
137.0	.910	1.013
138.0	1.037	1.018
139.0	1.020	.933
140.0	.912	.941
141.0	.984	.951
142.0	1.005	1.029
143.0	.985	.940
144.0	1.008	.902
145.0	1.021	1.055
146.0	1.057	1.060
147.0	.864	1.053
148.0	1.037	1.171
149.0	.918	1.016
150.0	.957	1.080
151.0	1.003	1.113
152.0	.926	1.070
153.0	.982	1.040
154.0	1.029	1.020
155.0	.923	1.050
156.0	.973	1.055
157.0	.854	.939
158.0	1.023	.869
159.0	.928	.946
160.0	1.068	1.037
161.0	1.051	1.077
162.0	1.077	.950
163.0	1.017	1.076
164.0	1.034	.935

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER....21 (001-005)  
 DATE OF TRIAL...25 SEP 1978  
 PRODUCTION TIME...13:54:55  
 OPERATOR.....JIST/DEBATS

SECTION  
 2274  
 FUNCTION

WAVELENGTH WAVELENGTH  
 0.400/CENTER 0.750/CENTER

145.0	.901	1.067
145.0	.800	.950
145.0	1.050	1.040
144.0	.925	1.099
143.0	1.060	1.056
170.0	.980	1.104
171.0	.987	1.069
172.0	1.014	1.047
173.0	1.105	1.017
174.0	1.026	1.032
175.0	1.009	1.105
175.0	1.092	1.156
177.0	.901	1.041
178.0	1.050	1.083
179.0	1.014	1.084
180.0	.964	.988
181.0	.980	1.151
182.0	.962	1.124
183.0	.980	1.084
184.0	.899	1.064
185.0	.904	1.186
185.0	.957	1.132
187.0	.882	1.061
188.0	.908	1.156
189.0	1.012	1.050
190.0	1.006	1.069
191.0	1.037	1.124
192.0	.938	.997
193.0	1.008	1.150
194.0	.979	1.131
195.0	.901	1.132
195.0	.906	1.056
197.0	.942	.959
198.0	.903	1.071
199.0	.934	1.135
200.0	.905	1.076
201.0	1.008	1.095
202.0	.905	.889
203.0	.962	.981
204.0	1.067	1.049
205.0	.903	1.081

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER.....21 (1991-005)  
 DATE OF TOTAL...25 SEP 1974  
 FUNCTION TIME...13:54:55  
 OBSERVANT.....JIST/DEBTS

SECTION 5.445/CENTER 0.750/CENTER  
 FUNCTION

WAVELENGTH	TRANSMITTANCE	WAVELENGTH	TRANSMITTANCE
205.0	.988	1.085	
207.0	.986	1.142	
208.0	.957	1.087	
209.0	.968	1.155	
210.0	.987	1.139	
211.0	.954	1.208	
212.0	.946	1.141	
213.0	.932	1.305	
214.0	.975	1.277	
215.0	.918	1.169	
216.0	.978	1.046	
217.0	.988	.953	
218.0	1.041	.999	
219.0	1.017	1.002	
220.0	1.025	.970	
221.0	.983	1.038	
222.0	1.001	1.090	
223.0	1.015	1.048	
224.0	.979	1.027	
225.0	1.070	1.061	
226.0	1.004	1.129	
227.0	.960	1.101	
228.0	1.042	1.041	
229.0	.977	1.108	
230.0	.950	1.178	
231.0	.980	1.117	
232.0	1.012	1.141	
233.0	.941	1.213	
234.0	1.014	1.168	
235.0	.861	1.111	
236.0	.937	1.091	
237.0	.985	1.210	
238.0	.975	1.004	
239.0	1.060	.897	
240.0	1.011	1.144	
241.0	.994	1.125	
242.0	1.037	1.108	
243.0	.979	.978	
244.0	.956	1.042	
245.0	.964	1.083	
246.0	.984	1.078	

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....E1 (DP1-005)  
 DATE OF TRIAL...25 SEP 1978  
 FUNCTION TIME...13:54:55  
 OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
247.0	1.005	1.134
248.0	.998	1.106
249.0	.959	1.062
250.0	.932	1.048
251.0	.876	.980
252.0	1.007	.901
253.0	1.001	1.127
254.0	1.047	1.088

CL VALUES (CM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TOTAL NUMBER.....E1 (001-005)  
DATE OF TOTAL...25 SEP 1978  
RUNNING TIME...13:54:55  
ORSCURANT.....DIST/DEPTS

SECTIONS F474 FUNCTION	CENTER
1.0	.00000
2.0	.00000
3.0	.00367
4.0	.00000
5.0	.00000
6.0	.00000
7.0	.00000
8.0	.03079
9.0	.00000
10.0	.00000
11.0	.00000
12.0	.00000
13.0	.01530
14.0	.00506
15.0	.37682
16.0	.29290
17.0	.03070
18.0	.00000
19.0	.14977
20.0	.00000
21.0	.12574
22.0	.00000
23.0	.06810
24.0	.00000
25.0	.02765
26.0	.25439
27.0	.00000
28.0	.00465
29.0	.35985
30.0	.72403
31.0	2.21135
32.0	2.29590
33.0	1.80548
34.0	2.34850
35.0	3.58612
36.0	4.28881
37.0	4.85682
38.0	4.80307
39.0	5.36040
40.0	6.15670
41.0	4.75717

CL VALUES (39/40\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....21 (721-005)  
DATE OF TRIAL....25 SEP 1974  
EXPOSURE TIME...13:54:55  
OBSERVATION.....DUST/DEPARTS

SECTION	SECTION	CL VALUE
52.0	52.0	4.32503
53.0	53.0	4.45080
54.0	54.0	5.33704
55.0	55.0	3.92402
56.0	56.0	4.21678
57.0	57.0	4.50660
58.0	58.0	4.89510
59.0	59.0	4.23145
60.0	60.0	3.92565
61.0	61.0	3.58776
62.0	62.0	2.83607
63.0	63.0	2.76884
64.0	64.0	2.38480
65.0	65.0	2.31260
66.0	66.0	2.37202
67.0	67.0	2.13917
68.0	68.0	2.18286
69.0	69.0	1.97082
70.0	70.0	1.87455
71.0	71.0	1.86515
72.0	72.0	1.83034
73.0	73.0	1.93882
74.0	74.0	2.00398
75.0	75.0	2.10432
76.0	76.0	2.17133
77.0	77.0	2.03104
78.0	78.0	2.20655
79.0	79.0	1.59051
80.0	80.0	1.50806
81.0	81.0	1.75103
82.0	82.0	1.97907
83.0	83.0	1.48719
84.0	84.0	1.51811
85.0	85.0	1.57360
86.0	86.0	1.30405
87.0	87.0	1.30402
88.0	88.0	1.30016
89.0	89.0	1.17433
90.0	90.0	.99003
91.0	91.0	.99706
92.0	92.0	1.00639

OF VALUES (IN 1/2000) HAVE CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TOTAL NUMBER.....21 (201-005)  
DATE OF PRINT.....25 SEP 1975  
RUNNING TIME.....13:54:55  
UNSCOPED.....JIST/DEHRTS

SECONDS	REFLECT
00.0	.52013
01.0	.57238
02.0	.57071
03.0	.49005
04.0	.44373
05.0	.36051
06.0	.43471
07.0	.52053
08.0	.50572
09.0	.57414
10.0	.34395
11.0	.31729
12.0	.10386
13.0	.26880
14.0	.20283
15.0	.12742
16.0	.32071
17.0	.50476
18.0	.15340
19.0	.25116
20.0	.42446
21.0	.34352
22.0	.25402
23.0	.35500
24.0	.51503
25.0	.36013
26.0	.26444
27.0	.28770
28.0	.22054
29.0	.22630
30.0	.22242
31.0	.09092
32.0	.27233
33.0	.19160
34.0	.46102
35.0	.09084
36.0	.14713
37.0	.12344
38.0	.14700
39.0	.00000
40.0	.06322

ORIGINALS (CM/4002) DATA CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....21 (DRI-005)  
DATE OF TRIAL...25 SEP 1974  
FUNCTION TIME...13:54:55  
ORSCURANT.....DIST/DEPTS

SECONDS FROM FUNCTION	CENTER
124.0	.10463
125.0	.00000
126.0	.00000
127.0	.11503
128.0	.03504
129.0	.00000
130.0	.04957
131.0	.02655
132.0	.00000
133.0	.00551
134.0	.25300
135.0	.09210
136.0	.25200
137.0	.10244
138.0	.00000
139.0	.00000
140.0	.10400
141.0	.03347
142.0	.00000
143.0	.03000
144.0	.00000
145.0	.00000
146.0	.00000
147.0	.20434
148.0	.00000
149.0	.17401
150.0	.09059
151.0	.00000
152.0	.15812
153.0	.03652
154.0	.00000
155.0	.14424
156.0	.05500
157.0	.32330
158.0	.00000
159.0	.15326
160.0	.00000
161.0	.00000
162.0	.00000
163.0	.00000
164.0	.00000



CL VALUES (24/442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....51 (0P1-005)  
DATE OF TRIAL...25 SEP 1978  
FUNCTION TIME...13:54:55  
ORSCURANT.....JUST/DEBHTS

SECTIONS FROM FUNCTION	CENTER
145.0	.01301
146.0	.21951
147.0	.00000
148.0	.15968
149.0	.00000
170.0	.03305
171.0	.02642
172.0	.00000
173.0	.00000
174.0	.00000
175.0	.00000
176.0	.00000
177.0	.12416
178.0	.00000
179.0	.00000
180.0	.06442
181.0	.20572
182.0	.07973
183.0	.02859
184.0	.21719
185.0	.20597
186.0	.08946
187.0	.25790
188.0	.18805
189.0	.00000
190.0	.00000
191.0	.00000
192.0	.13113
193.0	.00000
194.0	.04380
195.0	.01756
196.0	.11050
197.0	.12286
198.0	.12041
199.0	.13491
200.0	.01066
201.0	.00000
202.0	.11500
203.0	.07985
204.0	.00000
205.0	.01426

CI VALUES (CONTINUED) DATA CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TOTAL NUMBER.....21 (001-005)  
DATE OF TOTAL....25 SEP 1978  
FUNCTION TIME...13254255  
ORIGIN.....JIST/DEBTS

SECT. NO.	FUNCTION	CEFFEN
209.0	.07247	
207.0	.02830	
204.0	.04407	
203.0	.06037	
210.0	.11050	
211.0	.00044	
212.0	.11297	
213.0	.14570	
216.0	.05214	
215.0	.17424	
218.0	.04501	
217.0	.33045	
214.0	.00000	
212.0	.00000	
220.0	.00000	
221.0	.10115	
222.0	.00000	
223.0	.00000	
224.0	.04438	
225.0	.00000	
226.0	.00000	
227.0	.00427	
228.0	.00000	
229.0	.04702	
230.0	.10506	
231.0	.12750	
232.0	.00000	
233.0	.12406	
234.0	.00000	
235.0	.30527	
236.0	.13227	
237.0	.11633	
238.0	.05231	
239.0	.00000	
240.0	.00000	
241.0	.01193	
242.0	.00000	
243.0	.04443	
244.0	.04255	
245.0	.07546	
246.0	.03205	

CL VALUES (CM/100) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....E1 (7PI-005)  
DATE OF TRIAL...25 SEP. 1978  
FUNCTION TIME...13:54:55  
SUSPENSANT.....DUST/DEBRIS

SECTIONS	
5474	
FUNCTION	CENTER
247.0	.00000
248.0	.15360
249.0	.08520
250.0	.18358
251.0	.27158
252.0	.00000
253.0	.00000
254.0	.00000

APPENDIX F. SECTION 4

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TRIAL: E2, DPG DUST ADD-ON

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F-4-2	TABLE: DOSAGE VERSUS DISTANCE ALONG CENTER ROW
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F-4-8	TABLE: CL VALUES ( $\text{GM}/\text{m}^2$ ) BACK CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

TRIAL E2, DRG DUST ADD-ON, 27 SEP 1979, 13:01:20, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSAGE (GM/MIN/M <sup>2</sup> )
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.00033
2	15.00	.00	1.50	.00022
3	30.00	.00	1.50	.00447
4	45.00	.00	1.50	.00195
5	60.00	.00	1.50	.00605
6	75.00	.00	1.50	.02033
7	90.00	.00	1.50	.01749
8	105.00	.00	1.50	.00580
9	120.00	.00	1.50	.00410
10	135.00	.00	1.50	.01158
11	150.00	.00	1.50	.00919
12	165.00	.00	1.50	.00505
13	180.00	.00	1.50	.00280
14	195.00	.00	1.50	.00080
15	210.00	.00	1.50	.00347

DOSAGE ALONG SIGHT LINES 1.35775 (GM/MIN/M<sup>2</sup>)

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
 MEASURED ALONG HOY 0

TRIAL E2, OPG MUST ADDON

DATE: 27 SEP 1974

OBSCURANT: DT

FUNCTION TIME 13:01:20

TIME AFTER FUNCTION  
 (SECONDS)

TRANSMITTANCE  
 (0.4-0.7)

1.23	1.057
2.14	1.014
3.04	1.027
3.96	.960
4.87	1.016
5.77	.923
6.57	.074
7.61	.053
8.56	.013
9.53	.010
10.47	.009
11.28	.008
12.24	.003
13.14	.007
14.16	.020
15.01	.017
16.01	.027
16.81	.044
17.63	.075
18.74	.023
19.66	.023
20.46	.021
21.52	.024
22.38	.026
23.43	.063
24.34	.033
25.18	.033
26.14	.042
26.94	.033
27.96	.050
28.88	.046
29.76	.051
30.70	.045
31.62	.066
32.53	.068
33.41	.085
34.35	.049
35.26	.040
36.17	.143
37.08	

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RDA 0

TRIAL E2, DPG DUST ADDON  
DATE: 27 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 13:01:20

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.23	
2.14	-.523
3.04	-.520
3.96	-.520
4.87	-.514
5.77	-.519
6.57	-.509
7.61	-.100
8.56	-.130
9.53	-.036
10.47	-.024
11.24	-.013
12.29	-.013
13.14	-.006
14.16	-.018
15.01	-.050
16.01	-.049
16.81	-.074
17.83	-.121
18.74	-.168
19.68	-.079
20.48	-.063
21.52	-.058
22.38	-.053
23.43	-.065
24.34	-.064
25.16	-.144
26.14	-.088
26.94	-.088
27.90	-.106
28.48	-.088
29.70	-.122
30.70	-.102
31.62	-.112
32.53	-.114
33.41	-.154
34.35	-.157
35.20	-.185
	-.195

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG R.T. 1

TRIAL 22, DPG MUST ADDON

DATE: 27 SEP 1978

OSSECURITY DT

FUNCTION TIME 15:01:20

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	.000
2.00	.511
3.00	3.161
4.00	.823
5.00	5.473
6.00	10.136
7.00	13.094
8.00	13.248
9.00	19.123
10.00	121.748
11.00	680.073
12.00	1429.773
13.00	1748.136
14.00	2108.143
15.00	
16.00	
17.00	
18.00	
19.00	
20.00	
21.00	
22.00	
23.00	
24.00	
25.00	
26.00	
27.00	
28.00	
29.00	
30.00	
31.00	
32.00	
33.00	
34.00	
35.00	
36.00	
37.00	
38.00	



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.000 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER...52 (DP1-005)  
DATE OF TRIAL...27 SEP 1979  
FUNCTION TIME...13: 1:20  
OBSERVANT.....JOST/DEARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/MM
1.3	1.074	.000
2.2	1.000	.000
3.1	.961	.000
4.0	1.030	.000
4.9	1.020	.000
5.7	.884	.229
6.5	.087	1.221
7.3	.051	1.291
8.7	.021	1.341
9.5	.010	1.456
10.5	.005	1.510
11.2	.008	1.506
12.0	.003	1.497
13.0	.005	1.453
14.1	.018	1.416
15.0	.015	1.403
16.1	.031	1.400
17.0	.044	1.431
17.9	.064	1.468
19.7	.031	1.556
19.5	.021	1.615
20.4	.015	1.633
21.4	.024	1.637
22.3	.023	1.644
23.3	.026	1.641
24.4	.057	1.547
25.1	.041	1.590
26.0	.033	1.600
26.9	.044	1.572
29.1	.036	1.541
29.9	.049	1.565
29.8	.046	1.553
30.6	.049	1.550
31.5	.046	1.553
32.6	.064	1.515
33.4	.067	1.496
34.4	.090	1.453
35.2	.093	1.434
36.2	.080	1.416
37.2	.162	1.255

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER.....22 (001-005)  
 DATE OF TESTAL...27 SEP 1978  
 POSITION TIME...13: 1:20  
 OBSERVER.....JST/DEBTS

SECTION  
 1201  
 FUNCTION

	WAVELENGTH A.445/CENTER	WAVELENGTH 0.750/CENTER
1.0	1.015	1.023
2.0	.945	1.030
3.0	.973	1.178
4.0	.911	1.191
5.0	.891	1.012
6.0	1.030	1.135
7.0	.825	1.017
8.0	.805	.115
9.0	.154	.320
10.0	.047	.149
11.0	.023	.101
12.0	.023	.095
13.0	.014	.070
14.0	.009	.067
15.0	.024	.120
16.0	.037	.148
17.0	.058	.201
18.0	.123	.254
19.0	.121	.300
20.0	.048	.243
21.0	.065	.210
22.0	.046	.161
23.0	.077	.243
24.0	.060	.160
25.0	.102	.255
26.0	.120	.260
27.0	.100	.253
28.0	.101	.234
29.0	.007	.224
30.0	.112	.234
31.0	.130	.252
32.0	.113	.245
33.0	.127	.260
34.0	.140	.260
35.0	.154	.330
36.0	.243	.162
37.0	.153	.242
38.0	.120	.253

LI VALUES (CM/4000) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....E2 (001-005)  
DATE OF TRIAL...27 SEP 1974  
FUNCTION TIME...13: 1:20  
PROGRAM...DIST/DEBTS

SECTIONS F21 FUNCTION	CENTER
1.0	.00000
2.0	.00000
3.0	.02837
4.0	.00002
5.0	.11537
6.0	.00000
7.0	.10871
8.0	1.52867
9.0	1.59600
10.0	3.10170
11.0	3.87101
12.0	3.49203
13.0	4.37230
14.0	4.80460
15.0	3.63489
16.0	3.38360
17.0	2.42205
18.0	2.15401
19.0	2.17361
20.0	2.50568
21.0	2.81205
22.0	3.17270
23.0	2.64102
24.0	2.80160
25.0	2.35270
26.0	2.14409
27.0	2.36489
28.0	2.35681
29.0	2.30879
30.0	2.20771
31.0	2.00687
32.0	2.20458
33.0	2.12417
34.0	1.50664
35.0	1.88984
36.0	1.45420
37.0	1.43175
38.0	1.70802

APPENDIX F. SECTION 5

CONTENTS

TRIAL: E3, DPG DUST ADD-ON

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F-5-2	TABLE: DOSAGE VERSUS DISTANCE ALONG CENTER ROW
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F-5-33	TABLE: TRANSMITTANCE AND CLOUD LUMINANCE FOR WAVELENGTH 1.060 $\mu\text{m}$ LOCATED ON CENTER ROW
F-5-43	TABLE: TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION
F-5-53	TABLE: CL VALUES ( $\text{GM}/\text{m}^2$ ) BACK CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

TRIAL E3, DPG DUST ADD-ON, 29 SEP 1978, 15126101, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSAGE (GM/MIN/M**3)
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.00573
2	15.00	.00	1.50	.00330
3	30.00	.00	1.50	.00584
4	45.00	.00	1.50	.00368
5	60.00	.00	1.50	.00658
6	75.00	.00	1.50	.00310
7	90.00	.00	1.50	.01342
8	105.00	.00	1.50	.01827
9	120.00	.00	1.50	.00758
10	135.00	.00	1.50	.00263
11	150.00	.00	1.50	.00423
12	165.00	.00	1.50	.00410
13	180.00	.00	1.50	.00303
14	195.00	.00	1.50	.00069
15	210.00	.00	1.50	.00247

DOSAGE ALONG SIGHT LINE# 1.26330 (GM/MIN/M\*\*2)

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

1.55	1.071
2.55	1.049
3.52	1.033
4.51	.887
5.50	.936
6.49	.956
7.48	.984
8.47	1.001
9.47	.989
10.47	1.027
11.46	1.039
12.46	.989
13.46	1.018
14.46	1.007
15.45	.997
16.44	.890
17.43	.922
18.43	.897
19.43	1.041
20.42	1.019
21.42	1.064
22.42	.930
23.41	1.063
24.41	1.012
25.40	1.033
26.39	.915
27.37	1.093
28.35	1.054
29.34	.894
30.33	1.023
31.32	.985
32.32	.917
33.31	.954
34.30	1.105
35.28	1.025
36.25	1.013
37.22	1.015
38.21	1.127
39.19	.990
40.19	1.025

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

41.20	1.033
42.20	.923
43.20	.771
44.20	.751
45.20	.541
46.21	.532
47.21	.276
48.21	.205
49.21	.173
50.19	.185
51.18	.189
52.17	.277
53.16	.369
54.15	.486
55.14	.513
56.13	.537
57.11	.609
58.10	.660
59.08	.656
60.07	.686
61.06	.630
62.05	.648
63.05	.733
64.07	.745
65.09	.751
66.11	.686
67.13	.762
68.13	.788
69.11	.851
70.11	1.000
71.11	.879
72.13	.924
73.13	1.061
74.14	1.044
75.16	.803
76.18	.960
77.20	.912
78.23	.882
79.26	1.007
80.27	.952

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

81.28	.998
82.27	.924
83.24	.843
84.22	1.030
85.19	.943
86.16	.859
87.15	1.035
88.13	1.042
89.13	.884
90.13	1.047
91.13	.897
92.14	1.009
93.15	.916
94.16	.971
95.16	1.006
96.15	.938
97.07	1.009
98.10	1.107
99.07	1.053
100.05	.955
101.03	.901
102.01	.885
102.98	.962
103.94	.968
104.91	.921
105.88	.929
106.85	.916
107.83	1.097
108.80	.909
109.77	.944
110.73	.933
111.70	1.006
112.67	1.046
113.65	1.097
114.62	.845
115.61	.986
116.61	.871
117.60	.821
118.60	.924
119.60	.981



TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

120.59	.989
121.55	.935
122.57	1.046
123.58	.777
124.60	.985
125.60	.763
126.58	.831
127.56	.800
128.54	.815
129.52	.948
130.51	.780
131.40	.797
132.46	.797
133.43	.897
134.40	.798
135.38	.919
136.35	.851
137.31	.840
138.28	.942
139.26	.886
140.23	.874
141.21	.895
142.18	.970
143.16	.846
144.15	.922
145.11	1.026
146.08	.865
147.05	.856
148.03	.910
149.01	.869
149.98	.903
150.97	.898
151.95	.879
152.94	.991
153.92	.893
154.90	.914
155.88	1.064
156.85	1.062
157.83	.915
158.82	1.024

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 17:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

159.81	.943
160.80	1.042
161.79	.876
162.74	.961
163.77	.870
164.75	.984
165.74	.948
166.73	.919
167.72	.886
168.72	1.007
169.72	.925
170.71	.880
171.70	.861
172.70	.903
173.70	.893
174.68	1.036
175.68	.960
176.67	.931
177.66	.880
178.64	.942
179.62	.934
180.59	1.049
181.59	1.016
182.57	.917
183.55	.913
184.53	.850
185.51	.939
186.49	.934
187.48	.890
188.44	.876
189.44	.731
190.43	1.008
191.41	1.019
192.41	1.023
193.39	.884
194.38	.916
195.37	.795
196.32	.925
197.33	.844
198.31	.977

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION (SECONDS)	TRANSMITTANCE (0.4-0.7)
199.29	.901
200.27	.956
201.25	.990
202.23	.919
203.21	.840
204.19	.957
205.18	.948
206.17	1.050
207.15	.965
208.14	.852
209.14	.875
210.13	.798
211.13	1.015
212.13	.874
213.13	.907
214.13	1.017
215.14	1.006
216.14	1.078
217.16	.985
218.17	.906
219.20	1.120
220.21	.965
221.22	.941
222.23	.855
223.23	1.110
224.23	1.003
225.24	.921
226.27	1.005
227.29	.994
228.30	.946
229.35	1.044
230.39	1.036
231.43	1.017
232.46	1.014
233.49	.787
234.51	.957
235.53	1.034
236.55	.929
237.56	1.068
238.57	.895

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

239.59	1.055
240.61	.952
241.62	.883
242.65	1.025
243.67	.960
244.70	1.028
245.72	1.062
246.77	1.000
247.83	1.034
248.87	.929
249.90	.981
250.92	1.051
251.95	.972
252.98	1.130
254.01	1.101
255.04	.878
256.07	1.009
257.10	1.004
258.12	.987
259.14	1.033
260.17	.952
261.21	1.016
262.23	1.016
263.25	1.078
264.27	1.093
265.29	.963
266.32	1.065
267.36	1.062
268.28	1.007
269.17	1.043
270.04	.951
270.92	.912
271.79	.900
272.67	.972
273.55	.990
274.45	.933
275.36	.998
276.27	1.037
277.17	1.141
278.06	1.149

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

278.96	.929
279.85	.946
280.75	1.042
281.65	1.042
282.54	.923
283.44	.998
284.34	1.189
285.24	1.026
286.15	.979
287.05	.948
287.94	1.011
288.84	1.017
289.75	.961
290.65	.969
291.56	.943
292.46	.975
293.36	1.124
294.26	1.168
295.17	1.106
296.08	.922
296.99	.883
297.90	.976
298.81	.993
299.71	1.032
300.63	.963
301.55	1.041
302.47	.934
303.41	.899
304.33	.932
305.25	.979
306.17	1.010
307.09	.838
308.01	.888
308.94	1.055
309.87	.938
310.79	.907
311.72	.925
312.65	.985
313.58	1.040
314.50	1.055

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG JUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

315.42	.981
316.34	.900
317.26	1.001
318.18	1.029
319.09	.894
320.02	.970
320.95	.868
321.88	1.059
322.82	1.033
323.75	.873
324.68	1.041
325.60	1.082
326.53	1.106
327.46	1.052
328.40	1.064
329.33	1.103
330.26	1.122
331.19	.983
332.12	1.007
333.05	.966
333.98	1.112
334.91	1.006
335.83	1.025
336.75	1.134
337.67	.995
338.60	1.070
339.54	.996
340.48	.944
341.43	1.063
342.38	1.116
343.32	1.000
344.26	.923
345.21	.970
346.09	.883
347.08	.878
348.02	.928
348.95	.988
349.88	1.027
350.81	.981
351.74	.871

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

352.67	.943
353.58	1.072
354.53	1.042
355.47	.899
356.41	.917
357.34	.995
358.28	1.025
359.21	.928
360.15	.990
361.09	.953
362.03	.870
362.93	1.035
363.89	.970
364.82	.953
365.74	.934
366.66	.864
367.57	.975
368.50	.986
369.42	.931
370.34	.999
371.27	1.033
372.20	.945
373.14	.950

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.55	-.420
2.55	-.418
3.52	-.417
4.51	-.402
5.50	-.407
6.49	-.409
7.48	-.412
8.47	-.413
9.47	-.412
10.47	-.416
11.46	-.417
12.46	-.412
13.46	-.414
14.46	-.414
15.45	-.413
16.44	-.401
17.43	-.405
18.43	-.402
19.43	-.417
20.42	-.414
21.42	-.419
22.42	-.406
23.41	-.419
24.41	-.411
25.40	-.409
26.39	-.361
27.37	-.375
28.35	-.406
29.34	-.394
30.33	-.415
31.32	-.378
32.32	-.378
33.31	-.384
34.30	-.402
35.28	-.406
36.25	-.410
37.22	-.408
38.21	-.423
39.19	-.410
40.19	-.416



CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

41.20	-.414
42.20	-.391
43.20	-.372
44.20	-.382
45.20	-.337
46.21	-.331
47.21	-.237
48.21	-.203
49.21	-.190
50.19	-.199
51.18	-.198
52.17	-.255
53.16	-.293
54.15	-.327
55.14	-.333
56.13	-.343
57.11	-.359
58.10	-.367
59.08	-.368
60.07	-.373
61.06	-.363
62.05	-.367
63.05	-.381
64.07	-.383
65.09	-.383
66.11	-.373
67.13	-.385
68.13	-.389
69.11	-.397
70.11	-.413
71.11	-.400
72.13	-.406
73.13	-.417
74.14	-.416
75.16	-.390
76.18	-.409
77.20	-.403
78.23	-.398
79.26	-.414
80.27	-.407

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

81.28	-.412
82.27	-.405
83.24	-.396
84.22	-.416
85.19	-.408
86.16	-.398
87.15	-.417
88.13	-.417
89.13	-.401
90.13	-.417
91.13	-.403
92.14	-.413
93.15	-.405
94.16	-.411
95.16	-.413
96.15	-.406
97.07	-.414
98.10	-.423
99.07	-.418
100.05	-.409
101.03	-.403
102.01	-.401
102.98	-.408
103.94	-.408
104.91	-.402
105.88	-.404
106.85	-.402
107.83	-.419
108.80	-.403
109.77	-.404
110.73	-.405
111.70	-.411
112.67	-.413
113.65	-.421
114.62	-.395
115.61	-.410
116.61	-.399
117.60	-.387
118.60	-.406
119.60	-.409

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

120.59	-.411
121.55	-.406
122.57	-.415
123.58	-.387
124.60	-.409
125.60	-.395
126.58	-.394
127.56	-.390
128.54	-.393
129.52	-.406
130.51	-.386
131.40	-.390
132.46	-.389
133.43	-.402
134.40	-.389
135.38	-.404
136.35	-.396
137.31	-.395
138.28	-.407
139.26	-.401
140.23	-.400
141.21	-.402
142.18	-.410
143.16	-.397
144.15	-.406
145.11	-.416
146.08	-.399
147.05	-.398
148.03	-.404
149.01	-.399
149.98	-.399
150.97	-.402
151.95	-.400
152.94	-.409
153.92	-.402
154.90	-.403
155.88	-.417
156.85	-.419
157.83	-.405
158.82	-.413

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

159.81	-.405
160.80	-.417
161.79	-.400
162.74	-.409
163.77	-.398
164.75	-.411
165.74	-.407
166.73	-.404
167.72	-.399
168.72	-.413
169.72	-.404
170.71	-.398
171.70	-.398
172.70	-.403
173.70	-.402
174.68	-.416
175.68	-.409
176.67	-.406
177.66	-.399
178.64	-.406
179.62	-.405
180.59	-.418
181.59	-.414
182.57	-.404
183.55	-.403
184.53	-.397
185.51	-.407
186.49	-.407
187.48	-.402
188.44	-.399
189.44	-.379
190.43	-.413
191.41	-.415
192.41	-.415
193.39	-.401
194.38	-.404
195.37	-.390
196.32	-.406
197.33	-.395
198.31	-.411

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

199.29	
200.27	-.403
201.25	-.409
202.23	-.412
203.21	-.405
204.19	-.395
205.18	-.409
206.17	-.408
207.15	-.418
208.14	-.410
209.14	-.397
210.13	-.400
211.13	-.390
212.13	-.415
213.13	-.400
214.13	-.403
215.14	-.415
216.14	-.414
217.16	-.420
218.17	-.412
219.20	-.404
220.21	-.424
221.22	-.409
222.23	-.408
223.23	-.397
224.23	-.423
225.24	-.414
226.27	-.405
227.27	-.413
228.30	-.413
229.35	-.408
230.39	-.417
231.43	-.416
232.46	-.415
233.49	-.415
234.51	-.388
235.53	-.407
236.55	-.416
237.56	-.406
238.57	-.420
	-.402

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
DATE: 29 SEP 1978  
OBSCURANT: DT  
FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

239.59	-.418
240.61	-.408
241.62	-.401
242.65	-.416
243.67	-.409
244.70	-.414
245.72	-.419
246.77	-.413
247.83	-.416
248.67	-.405
249.90	-.411
250.92	-.417
251.95	-.409
252.98	-.424
254.01	-.423
255.04	-.401
256.07	-.414
257.10	-.414
258.12	-.412
259.14	-.416
260.17	-.409
261.21	-.414
262.23	-.415
263.25	-.421
264.27	-.421
265.29	-.410
266.32	-.419
267.36	-.419
268.28	-.414
269.17	-.417
270.04	-.408
270.92	-.400
271.79	-.402
272.67	-.411
273.55	-.412
274.45	-.406
275.36	-.413
276.27	-.417
277.17	-.426
278.06	-.426

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

278.96	
279.85	-.406
280.75	-.406
281.65	-.417
282.54	-.417
283.44	-.405
284.34	-.412
285.24	-.429
286.15	-.416
287.05	-.411
287.94	-.408
288.84	-.412
289.75	-.415
290.65	-.408
291.56	-.409
292.46	-.407
293.36	-.410
294.26	-.424
295.17	-.426
296.08	-.421
296.99	-.405
297.90	-.399
298.81	-.410
299.71	-.413
300.63	-.413
301.55	-.406
302.47	-.416
303.41	-.406
304.33	-.403
305.25	-.406
306.17	-.411
307.09	-.414
308.01	-.395
308.94	-.402
309.87	-.411
310.79	-.403
311.72	-.403
312.65	-.403
313.58	-.412
314.50	-.417
	-.419

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

315.42	-.411
316.34	-.402
317.26	-.413
318.18	-.416
319.09	-.402
320.02	-.411
320.95	-.397
321.88	-.417
322.82	-.417
323.75	-.399
324.68	-.417
325.60	-.420
326.53	-.422
327.46	-.418
328.40	-.419
329.33	-.422
330.26	-.424
331.19	-.412
332.12	-.414
333.05	-.410
333.98	-.422
334.91	-.413
335.83	-.415
336.75	-.424
337.67	-.413
338.60	-.419
339.54	-.413
340.48	-.408
341.43	-.419
342.38	-.424
343.32	-.413
344.26	-.405
345.21	-.410
346.09	-.401
347.08	-.400
348.02	-.406
348.95	-.412
349.88	-.415
350.81	-.410
351.74	-.399



CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

352.67	-.407
353.58	-.419
354.53	-.417
355.47	-.400
356.41	-.404
357.34	-.413
358.28	-.415
359.21	-.406
360.15	-.412
361.09	-.409
362.03	-.400
362.93	-.415
363.89	-.410

END OF PROGRAM

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	.387
2.00	1.500
3.00	.000
4.00	.000
5.00	.000
6.00	.000
7.00	.000
8.00	.000
9.00	2.050
10.00	3.875
11.00	2.387
12.00	6.125
13.00	7.462
14.00	14.037
15.00	20.350
16.00	17.600
17.00	16.925
18.00	10.225
19.00	5.025
20.00	8.362
21.00	12.725
22.00	19.562
23.00	25.587
24.00	24.612
25.00	24.175
26.00	54.012
27.00	121.050
28.00	513.162
29.00	1001.275
30.00	875.787
31.00	954.925
32.00	944.800
33.00	1313.050
34.00	1596.975
35.00	1862.287
36.00	2119.387
37.00	2236.687
38.00	2176.387
39.00	2066.187
40.00	2029.725
	1980.975

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	1984.150
42.00	1935.075
43.00	1704.362
44.00	1491.087
45.00	1470.925
46.00	1370.687
47.00	1222.475
48.00	981.587
49.00	804.425
50.00	735.312
51.00	659.225
52.00	534.837
53.00	505.262
54.00	470.000
55.00	394.750
56.00	282.987
57.00	255.987
58.00	239.462
59.00	168.387
60.00	155.287
61.00	163.112
62.00	139.300
63.00	131.350
64.00	112.812
65.00	113.037
66.00	97.312
67.00	82.512
68.00	89.562
69.00	91.887
70.00	104.525
71.00	126.275
72.00	149.187
73.00	151.225
74.00	216.537
75.00	254.500
76.00	226.725
77.00	236.425
78.00	252.737
79.00	205.361
80.00	198.587

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
 DATE: 29 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
 (SECONDS)

LUMINANCE  
 (FOOTLAMBERTS)

81.00	173.025
82.00	156.162
83.00	148.887
84.00	148.087
85.00	153.875
86.00	154.825
87.00	153.975
88.00	149.325
89.00	130.475
90.00	143.325
91.00	172.050
92.00	166.900
93.00	145.950
94.00	142.037
95.00	139.937
96.00	127.187
97.00	106.150
98.00	94.462
99.00	94.225
100.00	94.987
101.00	86.687
102.00	86.250
103.00	79.412
104.00	87.287
105.00	99.137
106.00	108.762
107.00	120.837
108.00	132.937
109.00	136.675
110.00	153.175
111.00	160.750
112.00	177.312
113.00	200.950
114.00	206.287
115.00	212.887
116.00	226.187
117.00	228.525
118.00	250.850
119.00	250.675
120.00	262.250

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	269.550
122.00	273.412
123.00	286.962
124.00	284.325
125.00	270.400
126.00	268.987
127.00	263.800
128.00	266.350
129.00	264.850
130.00	250.637
131.00	237.062
132.00	232.275
133.00	224.762
134.00	222.200
135.00	214.650
136.00	204.387
137.00	191.550
138.00	178.250
139.00	168.975
140.00	161.200
141.00	156.150
142.00	145.662
143.00	136.662
144.00	132.800
145.00	132.100
146.00	121.837
147.00	123.387
148.00	115.437
149.00	116.500
150.00	103.487
151.00	106.512
152.00	109.800
153.00	123.450
154.00	122.437
155.00	115.025
156.00	105.662
157.00	107.400
158.00	107.600
159.00	117.150
160.00	126.262

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	129.287
162.00	130.987
163.00	133.525
164.00	141.737
165.00	144.400
166.00	149.962
167.00	156.650
168.00	167.650
169.00	171.900
170.00	180.250
171.00	191.112
172.00	193.475
173.00	194.725
174.00	194.637
175.00	198.162
176.00	203.087
177.00	202.337
178.00	211.137
179.00	219.787
180.00	226.875
181.00	228.037
182.00	233.000
183.00	238.787
184.00	246.687
185.00	243.450
186.00	248.387
187.00	249.325
188.00	251.100
189.00	257.287
190.00	270.900
191.00	279.500
192.00	282.825
193.00	285.100
194.00	288.350
195.00	282.262
196.00	277.775
197.00	276.637
198.00	262.300
199.00	255.250
200.00	249.437

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON  
 DATE: 29 SEP 1978  
 OBSCURANT: DT  
 FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
 (SECONDS)

LUMINANCE  
 (FOOTLAMBERTS)

201.00	251.325
202.00	245.550
203.00	241.425
204.00	232.187
205.00	231.575
206.00	237.062
207.00	235.437
208.00	234.062
209.00	224.925
210.00	221.975
211.00	220.600
212.00	212.962
213.00	199.200
214.00	187.400
215.00	184.700
216.00	177.912
217.00	184.175
218.00	179.562
219.00	180.612
220.00	170.950
221.00	155.812
222.00	155.662
223.00	143.112
224.00	145.062
225.00	148.025
226.00	152.225
227.00	140.450
228.00	140.137
229.00	139.712
230.00	141.562
231.00	131.437
232.00	135.262
233.00	137.125
234.00	128.425
235.00	117.112
236.00	111.937
237.00	112.475
238.00	113.925
239.00	113.437
240.00	112.050

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

241.00	106.775
242.00	105.062
243.00	106.212
244.00	105.012
245.00	94.662
246.00	94.337
247.00	94.625
248.00	92.912
249.00	89.887
250.00	90.475
251.00	84.512
252.00	90.475
253.00	95.075
254.00	90.987
255.00	77.000
256.00	80.200
257.00	76.037
258.00	74.487
259.00	80.050
260.00	71.112
261.00	71.337
262.00	84.662
263.00	79.700
264.00	79.412
265.00	89.200
266.00	87.287
267.00	92.675
268.00	90.012
269.00	83.000
270.00	85.937
271.00	101.450
272.00	96.062
273.00	96.750
274.00	96.437
275.00	92.412
276.00	95.100
277.00	91.900
278.00	93.712
279.00	91.225
280.00	83.350



LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

281.00	85.312
282.00	87.512
283.00	88.787
284.00	78.325
285.00	84.775
286.00	85.875
287.00	80.425
288.00	71.400
289.00	70.600
290.00	77.637
291.00	69.925
292.00	76.350
293.00	71.125
294.00	71.012
295.00	101.912
296.00	133.000
297.00	139.825
298.00	133.975
299.00	134.175
300.00	117.525
301.00	96.275
302.00	86.050
303.00	92.325
304.00	90.975
305.00	87.487
306.00	80.750
307.00	76.825
308.00	84.625
309.00	111.287
310.00	95.775
311.00	90.212
312.00	75.862
313.00	73.987
314.00	71.750
315.00	71.087
316.00	62.950
317.00	55.137
318.00	51.762
319.00	53.225
320.00	47.750

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1970

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

321.00	41.075
322.00	34.437
323.00	34.800
324.00	31.462
325.00	34.887
326.00	32.200
327.00	35.900
328.00	35.325
329.00	34.775
330.00	40.687
331.00	35.700
332.00	39.075
333.00	40.375
334.00	35.750
335.00	41.362
336.00	43.337
337.00	39.112
338.00	40.625
339.00	35.659
340.00	38.425
341.00	38.987
342.00	42.150
343.00	40.175
344.00	48.037
345.00	39.362
346.00	47.000
347.00	49.025
348.00	51.875
349.00	52.412
350.00	47.762
351.00	40.387
352.00	44.250
353.00	46.900
354.00	53.187
355.00	57.800
356.00	41.100
357.00	51.212
358.00	54.150
359.00	49.462
360.00	49.887

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG CENTER ROW

TRIAL E3, DPG DUST ADDON

DATE: 29 SEP 1978

OBSCURANT: DT

FUNCTION TIME 13:26:01

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

361.00  
362.00  
363.00  
364.00  
365.00  
366.00  
367.00  
368.00  
369.00  
370.00  
371.00  
372.00  
373.00

46.412  
53.300  
47.350  
49.987  
41.075  
30.137  
38.737  
34.937  
32.125  
30.750  
38.250  
27.687  
28.337

TRANSIMITTER AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.650 MICROMETER LOCATED ON CENTER 412

TOTAL NUMBER.....54 (191-195)

DATE OF TOTAL...29 SEP 1972

FUNCTION TIME...132248.1

ORBITANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.050)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/UM
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1.6	1.027	.000
2.5	1.047	.000
3.5	.939	.195
4.5	1.070	.000
5.5	.991	.011
5.5	.961	.045
7.5	.930	.063
8.5	.944	.021
9.5	1.077	.000
10.4	1.057	.000
11.5	1.075	.000
12.5	.986	.001
13.5	.964	.047
14.5	1.017	.000
15.4	1.034	.000
16.4	.934	.034
17.5	.975	.012
18.4	1.029	.000
19.5	.996	.000
20.5	1.110	.000
21.5	.933	.050
22.5	.902	.094
23.4	.933	.075
24.5	.992	.120
25.4	1.027	.000
26.5	.985	.016
27.4	.971	.018
29.4	1.037	.000
29.2	.976	.028
30.4	1.191	.000
31.4	.996	.021
32.2	.952	.181
33.4	.994	.024
34.5	1.055	.000
35.5	1.042	.000
36.2	.935	.120
37.3	.986	.063
39.0	.905	.159
39.3	1.006	.072
40.3	1.039	.051
41.2	.996	.130

TRANSMITTANCE, CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICRONS LOCATED ON CENTER ROW

TOTAL NUMBER....53 (DPI-005)  
DATE OF TOTAL...29 SEP 1971  
EXCITATION TIME...13:25:1  
DESIGNATION.....DIST/DEPT

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICRONS/CM**2/SR/NA
42.3	.940	.239
43.1	.744	.484
44.2	.733	.504
45.3	.553	.778
46.2	.535	.960
47.1	.302	1.150
48.1	.165	1.314
49.1	.200	1.278
50.3	.180	1.501
51.2	.208	1.239
52.2	.264	1.136
53.1	.357	.995
54.0	.444	.893
55.2	.555	.729
56.2	.584	.674
57.1	.674	.656
58.1	.654	.551
59.0	.712	.476
59.9	.650	.520
61.1	.613	.555
62.1	.755	.342
63.0	.710	.432
64.1	.743	.364
65.1	.758	.346
66.1	.783	.304
67.1	.897	.197
68.0	.882	.179
69.2	.895	.165
70.0	.943	.111
71.2	.958	.043
72.2	.989	.029
73.0	.986	.032
74.2	.999	.002
75.2	1.052	.000
76.2	1.070	.000
77.1	1.090	.000
78.2	1.004	.012
79.2	.984	.019
80.3	1.032	.000
81.2	.925	.100
82.2	1.037	.000

TRANSMITTANCE AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.65 MICROMETER LOCATED ON CENTER 40.

TRIAL NUMBER....23 (001-005)  
DATE OF TRIAL....29 SEP 1974  
FUNCTION TIME....13:26:11  
INSTRUMENT.....7037/DE4915

SECTIONS  
#404  
FUNCTION

TRANSMITTANCE  
(1.000)

CLOUD LUMINANCE  
MICROWATTS/CM\*\*2/89/90

43.2	.943	.096
44.3	.971	.055
45.1	1.011	.020
45.2	.953	.059
47.3	.951	.087
48.1	.923	.118
49.3	.941	.042
50.2	.934	.055
51.2	.954	.079
52.2	1.011	.020
53.2	.961	.050
54.1	.936	.021
55.0	.986	.048
55.2	.949	.045
57.2	.946	.063
58.1	1.052	.000
59.0	.944	.055
100.1	.990	.155
100.9	.954	.113
102.0	1.009	.034
102.9	.928	.124
104.0	.947	.189
104.9	.930	.125
105.3	.944	.056
106.7	.869	.193
107.9	.958	.110
109.3	.989	.076
109.9	.924	.144
110.4	1.029	.031
111.9	.862	.201
112.7	.864	.134
113.7	.963	.089
114.7	1.070	.000
115.5	.987	.149
115.7	.892	.167
117.6	.987	.149
118.7	1.001	.074
119.5	.910	.179
120.7	.419	.290
121.6	.930	.141
122.6	.834	.248

TRANSMITTANCE AND CLOUD LUMINANCE FOR  
 AVELE WITH 1.000 MICROMETER LOCATED IN CENTER 400

TOTAL HUMIDITY...53 (DP1-005)  
 DATE OF TOTAL...29 SEP 1974  
 FUNCTION TIME...14:20:1  
 OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/000
123.5	.994	.045
124.7	.915	.299
125.6	.947	.220
126.5	.743	.304
127.4	.450	.241
128.5	.804	.297
129.5	.985	.156
130.6	.703	.308
131.5	.914	.286
132.5	.924	.035
133.5	.475	.214
134.4	.935	.156
135.4	.754	.125
136.4	.934	.263
137.2	.477	.231
138.3	.933	.154
139.2	.925	.162
140.3	.913	.132
141.3	.475	.219
142.2	.890	.146
143.2	1.004	.054
144.2	1.006	.072
145.0	.905	.200
146.1	.420	.152
147.1	.930	.141
148.0	.913	.150
149.0	.994	.085
150.0	.875	.203
151.0	.984	.056
152.0	.877	.144
153.0	.946	.093
153.9	.471	.111
154.9	.923	.149
155.9	1.100	.000
156.8	.923	.134
157.8	.951	.103
158.8	.442	.179
159.9	1.077	.000
160.7	.420	.152
161.9	1.019	.042
162.8	.976	.075

TRANSMITTANCE AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.050 MICROMETER LOCATED ON CENTER ROAD

TRIAL NUMBER.....E3 (OP1-003)  
DATE OF TRIAL...29 SEP 1978  
FUNCTION TIME...13:24: 1  
DISBURSANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICROWATTS/CM**2/39/MM
163.3	.920	.136
164.7	.900	.114
165.7	.847	.218
166.7	.905	.153
167.3	.943	.111
168.3	.875	.203
169.4	.869	.204
170.5	.958	.110
171.5	.937	.229
172.3	.940	.130
173.3	.875	.218
174.3	.944	.121
175.5	.852	.228
176.5	.915	.142
177.7	.900	.159
178.7	.935	.135
179.5	.925	.145
180.7	.795	.305
181.5	.887	.189
182.5	.907	.195
183.5	.902	.172
184.5	.915	.142
185.5	.897	.177
186.4	1.027	.034
187.5	.895	.180
188.5	.844	.235
189.4	.872	.205
190.5	1.006	.057
191.3	.872	.221
192.5	.877	.200
193.5	.918	.170
194.4	.933	.154
195.4	.819	.264
196.3	.831	.250
197.3	.984	.092
198.4	.976	.106
199.3	.968	.114
200.2	.722	.371
201.3	.915	.154
202.3	.847	.234
203.3	.880	.197



TRANSMITTANCE AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED IN CENTER ROD

TRIAL NUMBER...55 (DPI-005)  
DATE OF TRIAL...29 SEP 1978  
FUNCTION TIME...13:26:1  
DISCRIMANT.....JUST/DEARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/MM
204.2	.431	.266
205.2	.438	.132
206.1	.426	.256
207.2	.424	.243
208.2	.490	.170
209.1	.452	.212
210.2	.487	.173
211.2	.437	.245
212.2	.435	.120
213.0	.796	.274
214.2	.440	.191
215.2	.420	.136
216.2	.410	.148
217.1	.462	.201
218.2	.454	.225
219.3	.406	.247
220.3	.463	.089
221.1	.459	.219
222.3	.420	.136
223.3	.442	.179
224.3	.424	.129
225.3	.459	.204
226.4	.408	.150
227.4	1.001	.047
228.4	.486	.079
229.4	.456	.097
230.5	.415	.126
231.5	.437	.214
232.5	.405	.138
233.6	.458	.094
234.6	.448	.090
235.6	.423	.134
236.6	.442	.152
237.6	.423	.134
238.6	.463	.080
239.6	.428	.128
240.6	.405	.153
241.6	.426	.112
242.7	.425	.115
243.8	.467	.195
244.6	.408	.119

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....23 (091-005)  
DATE OF TRIAL...29 SEP 1978  
EXPOSITION TIME...15:26:1  
OBSERVANT.....DUST/DEBRIS

SECONDS 2274 FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/M
245.5	1.001	.031
245.7	.992	.156
247.3	.890	.170
248.9	.984	.051
251.0	1.062	.000
251.0	.943	.111
252.0	.942	.185
253.0	.914	.239
254.1	.911	.148
255.1	.930	.094
256.1	.925	.100
257.2	1.024	.021
259.2	.940	.045
259.1	.972	.159
260.3	.946	.093
261.1	.915	.126
262.2	.918	.106
263.3	.923	.102
264.3	.984	.051
265.3	.900	.128
266.2	.954	.178
267.4	.920	.135
269.3	.967	.195
269.2	.952	.229
270.0	.900	.170
270.4	.951	.138
271.9	.908	.147
272.5	.909	.260
273.5	.902	.140
274.4	.875	.203
275.4	1.009	.054
276.2	.929	.136
277.1	.918	.139
278.1	.930	.141
279.9	.910	.148
279.9	.935	.104
280.7	.978	.072
281.5	.915	.160
282.5	.929	.222
283.4	.962	.170
284.2	.969	.193

TRANSMITTANCE AND GLASS LUMINANCE FOR  
WAVELENGTH 1.050 MICROMETER LOCATED ON CENTER RD

TRIAL NUMBER.....E3 (001-005)  
DATE OF TRIAL...24 SEP 1974  
EXPOSURE TIME...15:25:1  
OSCILLANT.....001206418

SECTION TRANSMITTANCE GLASS LUMINANCE  
FROM (1.050) MICROMETERS/CM\*\*2/SR/CM  
FUNCTION

285.2	.920	.135
285.1	.913	.129
287.1	.900	.130
287.0	.902	.155
289.4	.903	.111
289.4	.963	.057
290.7	.930	.110
291.5	.900	.175
292.0	.915	.154
293.4	.956	.091
294.3	.954	.094
295.1	.783	.304
295.1	.953	.115
297.0	.920	.136
297.9	.905	.052
298.4	.902	.224
299.7	.982	.163
300.4	.991	.054
301.5	.962	.185
302.3	.773	.268
303.3	.944	.074
304.3	1.029	.000
305.3	1.103	.000
305.2	1.004	.054
307.1	.948	.106
308.0	.965	.070
308.5	1.027	.000
309.4	1.027	.014
310.8	.819	.249
311.7	.924	.112
312.7	.946	.124
313.5	.976	.090
314.5	1.067	.000
315.3	1.042	.000
315.2	1.032	.000
317.2	.956	.097
319.1	.875	.203
319.1	.915	.142
319.9	.910	.148
321.0	.953	.084
321.9	.920	.121

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.000 MICRONS LOCATED ON CENTER ROW

TRIAL NUMBER.....21 (001-004)  
DATE OF TRIAL...29 SEP 1970  
FUNCTION TIME...13:25:1  
OBSERVANT.....JUST/DEBATS

SECTION 5234 FUNCTION	TRANSMITTANCE (1.000)	CLOUD LUMINANCE MICRONS/CM**2/89/44
322.7	.405	.133
323.4	.400	.124
324.7	.428	.128
325.3	.443	.111
325.5	.446	.109
327.5	.401	.058
328.4	1.034	.010
329.4	.405	.138
330.3	.443	.090
331.2	.463	.073
332.2	.458	.063
332.4	.433	.107
334.0	.457	.141
334.4	.430	.110
335.4	.435	.120
336.7	1.045	.000
337.6	.487	.157
339.7	.447	.187
339.5	1.072	.000
340.5	1.024	.006
341.4	1.011	.020
342.3	.446	.093
343.3	.484	.051
344.3	.475	.167
345.1	.410	.132
346.2	1.004	.044
346.4	.452	.212
347.4	.405	.122
349.0	.468	.052
349.4	.468	.067
350.8	.433	.091
351.7	1.052	.000
352.7	.446	.104
353.6	1.001	.031
354.6	.459	.204
355.5	.433	.122
356.3	1.022	.008
357.4	.466	.070
358.2	.484	.051
359.1	.484	.035
360.2	.484	.035

TRANSMITTANCE AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.050 MICROMETER LOCATED ON CENTER ROAD

TOTAL NUMBER....53 (001-005)  
DATE OF TRIAL...29 SEP 1979  
FUNCTION TIME...131248.1  
OBSERVANT.....DUST/DEWETS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.050)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/M
361.0	.840	.150
362.1	.923	.087
363.2	.863	.057
363.2	.020	.121
364.4	.984	.051
365.4	.824	.221
366.7	.905	.134
367.6	1.004	.028
368.6	.883	.045
369.3	.813	.098
370.3	.854	.178
371.3	.800	.139
372.2	.944	.051
373.2	.443	.111

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....53 (OPI-005)  
 DATE OF TRIAL...29 SEP 1974  
 FUNCTION TIME...13:26: 1  
 DISCUSSION.....JST/DERRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 5.443/CENTER 9.750/CENTER  
 FUNCTION

1.0	.907	.947
2.0	1.024	1.089
3.0	1.018	1.165
4.0	1.068	1.109
5.0	.989	1.185
6.0	1.025	.902
7.0	1.030	.883
8.0	1.046	.953
9.0	.965	1.063
10.0	.931	1.056
11.0	.878	.898
12.0	.964	.986
13.0	.945	1.047
14.0	.917	1.132
15.0	.956	1.221
16.0	.933	1.199
17.0	1.004	1.280
18.0	1.004	1.162
19.0	.981	1.287
20.0	1.008	1.097
21.0	1.004	1.203
22.0	.968	1.164
23.0	.892	1.139
24.0	.896	1.092
25.0	1.003	1.097
26.0	.943	.979
27.0	.944	1.084
28.0	1.094	1.188
29.0	1.047	.990
30.0	.963	.972
31.0	.899	1.187
32.0	.908	1.163
33.0	.820	1.118
34.0	1.044	.948
35.0	.980	1.041
36.0	.977	1.001
37.0	.945	1.085
38.0	1.004	1.114
39.0	.959	1.167
40.0	.982	1.114
41.0	.802	.939

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....E3 (DP1-005)  
 DATE OF TRIAL....29 SEP 1978  
 FUNCTION TIME....13:26: 1  
 OBSERVANT.....DUST/DERRIS

SECTIONS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 5.443/CENTER 9.750/CENTER

42.0	.718	.905
43.0	.793	.745
44.0	.619	.732
45.0	.512	.475
46.0	.253	.479
47.0	.267	.470
48.0	.224	.400
49.0	.290	.496
50.0	.342	.572
51.0	.461	.573
52.0	.465	.595
53.0	.496	.726
54.0	.591	.763
55.0	.635	.828
56.0	.657	.955
57.0	.654	.833
58.0	.663	.774
59.0	.734	.839
60.0	.725	.944
61.0	.903	.867
62.0	.776	.818
63.0	.773	.818
64.0	.853	.842
65.0	.879	.952
66.0	.853	1.025
67.0	.929	1.099
68.0	.961	.914
69.0	.972	1.062
70.0	1.047	.908
71.0	.973	1.002
72.0	.953	1.158
73.0	.844	1.013
74.0	.992	.919
75.0	1.094	.939
76.0	1.015	1.027
77.0	.975	1.065
78.0	1.004	1.049
79.0	1.065	1.104
80.0	1.006	1.071
81.0	1.058	.933
82.0	.950	.969

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER...E3 (OP1-005)

DATE OF TRIAL...29 SEP 1975

FUNCTION TIME...13:26:11

OBSCURANT.....JUST DEBRIS

SECONDS  
FROM  
FUNCTION

WAVELENGTH WAVELENGTH  
5.645/CENTER 9.750/CENTER

83.0	.995	.921
84.0	.989	.902
85.0	.925	1.025
86.0	1.006	1.051
87.0	.922	.894
88.0	.953	1.055
89.0	.997	1.059
90.0	1.058	1.137
91.0	1.022	1.154
92.0	.966	1.144
93.0	1.115	1.010
94.0	.940	1.112
95.0	.935	.999
96.0	1.021	.966
97.0	1.049	.993
98.0	.974	1.103
99.0	.913	1.070
100.0	.851	1.096
101.0	1.019	1.083
102.0	.956	1.033
103.0	.891	.922
104.0	.827	1.054
105.0	.482	1.023
106.0	.926	1.046
107.0	.894	1.212
108.0	1.041	1.093
109.0	.988	1.008
110.0	.919	1.168
111.0	.912	1.061
112.0	.902	1.102
113.0	.947	1.290
114.0	1.002	1.010
115.0	.892	.949
116.0	.965	.978
117.0	.864	1.114
118.0	.899	1.004
119.0	.961	1.086
120.0	.806	.949
121.0	.852	1.062
122.0	.991	.971
123.0	.927	1.061



# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....53 (OPI-005)  
 DATE OF TRIAL...29 SEP 1978  
 FUNCTION TIME...132201 L  
 DISCUSSION.....JUST/DEARIS

SECTION  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 5.445/CEMTER 9.750/CEMTER

121.0	1.048	.953
125.0	.875	1.015
126.0	1.029	.908
127.0	.942	.935
128.0	.982	.897
129.0	.977	1.026
130.0	.810	.913
131.0	.894	.878
132.0	.784	.911
133.0	.917	.855
134.0	.989	.889
135.0	.960	.895
136.0	.943	.944
137.0	.987	1.036
138.0	.878	1.004
139.0	.828	.907
140.0	.897	.973
141.0	.893	1.042
142.0	.860	1.008
143.0	.888	1.169
144.0	.863	1.194
145.0	.928	.845
146.0	.886	1.055
147.0	.953	1.068
148.0	.881	1.000
149.0	.962	1.057
150.0	.911	.967
151.0	.937	1.068
152.0	.921	.889
153.0	.977	.966
154.0	1.037	1.125
155.0	.914	1.017
156.0	.933	1.050
157.0	1.001	.969
158.0	.996	1.048
159.0	1.016	1.108
160.0	.970	.987
161.0	.915	.986
162.0	.901	.929
163.0	.915	.947
164.0	.926	1.061

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....E3 (DP1-005)  
 DATE OF TRIAL...24 SEP 1974  
 FUNCTION TIME...13:26:1  
 DISCRIMANT.....JUST/DEBRIS

SECTIONS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 5.443/CENTER 9.750/CENTER

165.0	.972	.990
165.0	.951	.968
167.0	.951	1.048
168.0	.924	.913
169.0	.903	.900
170.0	.949	.985
171.0	1.025	.952
172.0	1.011	.955
173.0	.972	.964
174.0	.855	1.066
175.0	.951	1.022
176.0	1.056	1.078
177.0	1.123	.913
178.0	.906	.862
179.0	.847	.929
180.0	.920	1.013
181.0	.982	.991
182.0	.966	.947
183.0	.944	.891
184.0	.914	1.095
185.0	.868	.967
186.0	1.007	.980
187.0	1.034	.886
188.0	.957	.905
189.0	.914	1.010
190.0	.836	1.077
191.0	.863	.967
192.0	1.030	1.005
193.0	.962	.931
194.0	.914	1.057
195.0	.839	.941
196.0	.894	.960
197.0	.850	.946
198.0	1.019	.854
199.0	.915	.953
200.0	.924	1.100
201.0	.975	.953
202.0	.870	1.005
203.0	.889	.825
204.0	.938	1.126
205.0	.981	1.145

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....53 (DP1-005)  
 DATE OF TRIAL...29 SEP 1974  
 FUNCTION TIME...13:26:1  
 OBSERVANT.....JOST/DEARIS

SECONDS WAVELENGTH WAVELENGTH  
 F334 3.445/CENTER 9.750/CENTER  
 FUNCTION

205.0	.915	1.227
207.0	.938	1.125
209.0	.949	1.034
209.0	.957	1.064
210.0	.971	1.098
211.0	.966	1.213
212.0	.968	1.093
213.0	.992	1.023
214.0	1.034	1.190
215.0	.986	.990
215.0	.973	1.135
217.0	.954	1.093
219.0	.926	1.070
219.0	.877	1.150
220.0	.831	1.233
221.0	.892	1.013
222.0	.891	1.083
223.0	.870	1.133
224.0	.906	1.195
225.0	.863	1.015
225.0	.900	1.101
227.0	1.020	1.194
228.0	1.016	1.119
229.0	.870	1.191
230.0	.958	1.240
231.0	.863	1.013
232.0	.910	1.118
233.0	1.054	1.005
234.0	.964	1.235
235.0	1.014	1.044
236.0	.885	1.065
237.0	.939	1.011
239.0	.943	1.054
239.0	.929	.992
240.0	.832	1.073
241.0	.867	1.139
242.0	1.042	1.185
243.0	.982	1.125
244.0	.981	1.229
245.0	.837	1.014
246.0	1.025	1.169

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....E3 (DP1-005)  
 DATE OF TRIAL...29 SEP 1978  
 EXPOSITION TIME...131200Z  
 OBSERVANT.....JJSI/DEBRIS

SECONDS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 3.445/CENTER 9.750/CENTER

247.0	.009	1.156
248.0	.090	1.162
249.0	.453	1.133
250.0	1.021	1.074
251.0	.754	1.082
252.0	1.056	1.090
253.0	.776	1.237
254.0	.907	1.425
255.0	.830	1.292
256.0	1.013	1.395
257.0	.899	1.233
258.0	.987	1.130
259.0	.958	1.062
260.0	1.000	1.167
261.0	1.087	1.217
262.0	1.065	1.349
263.0	.012	1.211
264.0	.913	1.166
265.0	.904	1.151
266.0	.813	1.144
267.0	.892	1.211
268.0	.985	1.177
269.0	.860	1.192
270.0	.991	1.096
271.0	.972	1.068
272.0	.981	1.119
273.0	.904	1.090
274.0	1.003	1.057
275.0	.962	.982
276.0	.963	1.127
277.0	.985	1.149
278.0	.958	1.124
279.0	.924	1.109
280.0	1.002	1.181
281.0	1.029	1.172
282.0	.985	1.134
283.0	1.017	1.115
284.0	.824	1.241
285.0	.999	1.149
286.0	.988	1.084
287.0	.943	1.210

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....23 (OF 1-005)  
 DATE OF TRIAL...24 SEP 1978  
 FUNCTION TIME...13:26: 1  
 OBSERVANT.....JUST/DEBRIS

SECTIONS  
 5971  
 FUNCTION

	WAVELENGTH 5.443/CENTER	WAVELENGTH 9.750/CENTER
283.0	.902	1.101
284.0	.870	1.149
290.0	.743	1.212
291.0	.879	1.222
292.0	.846	1.141
293.0	.945	1.140
294.0	.824	1.091
295.0	.828	1.039
296.0	.952	1.269
297.0	.838	1.308
298.0	.866	1.175
299.0	.907	1.025
300.0	.869	1.071
301.0	1.053	.983
302.0	.832	1.147
303.0	.867	1.043
304.0	.955	.950
305.0	.843	.930
306.0	.972	1.034
307.0	.927	1.060
308.0	1.114	1.089
309.0	.939	1.057
310.0	.848	1.064
311.0	1.040	1.085
312.0	.981	1.075
313.0	.925	.974
314.0	.755	1.023
315.0	1.035	.921
316.0	.997	1.038
317.0	.966	1.215
318.0	.881	1.105
319.0	.871	.989
320.0	.894	1.000
321.0	1.015	1.076
322.0	.954	.878
323.0	.812	1.098
324.0	1.115	1.081
325.0	1.011	1.005
326.0	.993	.935
327.0	.960	1.125
328.0	1.223	1.128

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....E3 (CPI-005)

DATE OF TRIAL...29 SEP 1974

FUNCTION TIME...13:26: 1

DISCORDANT.....JUST/DEBTS

SECONDS FROM FUNCTION	WAVELENGTH 5.445/CENTER	WAVELENGTH 5.750/CENTER
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329.0	.975	1.039
330.0	1.023	1.057
331.0	.965	.904
332.0	.991	1.127
333.0	1.054	1.203
334.0	.996	1.216
335.0	.933	1.170
336.0	.835	1.124
337.0	.914	1.062
338.0	.484	1.093
339.0	1.005	1.091
340.0	.839	1.071
341.0	.947	1.112
342.0	.979	1.023
343.0	.907	.940
344.0	.865	.942
345.0	.905	1.053
346.0	1.066	.897
347.0	.979	.986
348.0	1.032	1.020
349.0	1.060	1.045
350.0	1.047	1.000
351.0	.955	1.160
352.0	.988	1.158
353.0	1.004	.906
354.0	.838	1.066
355.0	1.021	.991
356.0	1.015	1.009
357.0	.994	1.117
358.0	.949	1.059
359.0	.988	1.025
360.0	.901	.981
361.0	1.027	1.037
362.0	.965	.987
363.0	.921	1.013
364.0	.997	1.064
365.0	.964	1.035
366.0	.981	.996
367.0	.962	1.026
368.0	.993	.978
369.0	.887	.985

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....E3 (DP1-005)  
 DATE OF TRIAL...29 SEP 1978  
 FUNCTION TIME...13:26: 1  
 ONSCOURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 4.750/CENTER
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370.0	1.015	.899
371.0	.983	.971
372.0	.907	.920
373.0	.937	1.012

CL VALUES (692 1972) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....23 (OP1-005)  
DATE OF TRIAL...24 SEP 1974  
FUNCTION TIME...13:26: 1  
INSURANT.....JUST/DERRIS

SECONDS FROM FUNCTION	CENTER
1.0	.14749
2.0	.00000
3.0	.00000
4.0	.00000
5.0	.06308
6.0	.00000
7.0	.00000
8.0	.00000
9.0	.07155
10.0	.14464
11.0	.26448
12.0	.06648
13.0	.00462
14.0	.40464
15.0	.24133
16.0	.14047
17.0	.00000
18.0	.00000
19.0	.12346
20.0	.00000
21.0	.00000
22.0	.06576
23.0	.23154
24.0	.22285
25.0	.00000
26.0	.01491
27.0	.01148
28.0	.00000
29.0	.00000
30.0	.07508
31.0	.21704
32.0	.19641
33.0	.40311
34.0	.00000
35.0	.04133
36.0	.04814
37.0	.11402
38.0	.00000
39.0	.08497
40.0	.03741
41.0	.44741



CL VALUES (GM/4\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER...03 (DP1-005)  
DATE OF TRIAL...29 SEP 1978  
FUNCTION TIME...13:25:1  
DISCUSSANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
42.0	.57357
43.0	.47145
44.0	.47349
45.0	1.55995
46.0	2.77514
47.0	2.67796
48.0	3.03433
49.0	2.51507
50.0	2.18040
51.0	1.57242
52.0	1.55655
53.0	1.42468
54.0	1.06936
55.0	.92277
56.0	.85142
57.0	.86265
58.0	.83268
59.0	.62897
60.0	.65387
61.0	.44528
62.0	.51607
63.0	.52364
64.0	.32355
65.0	.26121
66.0	.32378
67.0	.14942
68.0	.08135
69.0	.05826
70.0	.00000
71.0	.05652
72.0	.09821
73.0	.34333
74.0	.01680
75.0	.00000
76.0	.00000
77.0	.05230
78.0	.00000
79.0	.00000
80.0	.00000
81.0	.00000
82.0	.10485

CL VALUES (CMZ 442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TOTAL NUMBER.....E3 (OP1-005)  
DATE OF TOTAL...29 SEP 1978  
FUNCTION TIME...13:26:1  
OBSERVANT.....DUST/DERRIS

SECONDS FROM FUNCTION	CENTER
43.0	.22461
44.0	.23474
45.0	.39142
46.0	.00000
47.0	.16405
48.0	.09795
49.0	.00592
50.0	.00000
51.0	.00000
52.0	.07105
53.0	.00000
54.0	.12569
55.0	.13633
56.0	.00000
57.0	.00000
58.0	.04306
59.0	.18419
100.0	.32751
101.0	.00000
102.0	.09181
103.0	.23502
104.0	.38467
105.0	.25534
106.0	.15586
107.0	.22730
108.0	.00000
109.0	.02391
110.0	.17090
111.0	.18662
112.0	.20897
113.0	.11096
114.0	.00000
115.0	.23249
116.0	.07131
117.0	.29630
118.0	.21509
119.0	.08130
120.0	.43662
121.0	.32625
122.0	.23464
123.0	.15359

CL VALUES (6M7442) WACA CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....53 (DPI-005)  
DATE OF TRIAL...29 SEP 1974  
FUNCTION TIME...15:26:1  
DISCUSSANT.....JUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
124.0	.00000
125.0	.27507
126.0	.00000
127.0	.12000
128.0	.03715
129.0	.04824
130.0	.42650
131.0	.22685
132.0	.48180
133.0	.17523
134.0	.23317
135.0	.04381
136.0	.11895
137.0	.02620
138.0	.26345
139.0	.54365
140.0	.22028
141.0	.22895
142.0	.30611
143.0	.24009
144.0	.29944
145.0	.15273
146.0	.24607
147.0	.09674
148.0	.25812
149.0	.07963
150.0	.18843
151.0	.13160
152.0	.15767
153.0	.04732
154.0	.00000
155.0	.14306
156.0	.13707
157.0	.00000
158.0	.00791
159.0	.00000
160.0	.06178
161.0	.17936
162.0	.21231
163.0	.17722
164.0	.15695

CL VALUES (G+M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....23 (DPI-005)  
DATE OF TRIAL...29 SEP 1978  
FUNCTION TIME...13:26:1  
OBSERVANT.....DJST/OEBRIS

SECONDS FROM FUNCTION	CENTER
165.0	.05707
166.0	.10209
167.0	.10189
168.0	.15961
169.0	.20731
170.0	.10593
171.0	.00000
172.0	.00000
173.0	.05812
174.0	.36698
175.0	.19121
176.0	.00000
177.0	.00000
178.0	.20038
179.0	.22178
180.0	.16851
181.0	.03706
182.0	.29316
183.0	.11727
184.0	.16287
185.0	.28633
186.0	.00000
187.0	.00000
188.0	.08345
189.0	.17038
190.0	.35773
191.0	.30007
192.0	.00000
193.0	.07765
194.0	.18247
195.0	.35726
196.0	.22670
197.0	.32978
198.0	.00000
199.0	.18046
200.0	.16014
201.0	.05189
202.0	.24208
203.0	.23824
204.0	.12974
205.0	.03960

CL VALUES (GM/4\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....E3 (DP1-005)  
DATE OF TRIAL...29 SEP 1978  
FUNCTION TIME...13:26: 1  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
205.0	.17959
207.0	.12696
208.0	.34493
209.0	.24386
210.0	.28093
211.0	.06943
212.0	.06515
213.0	.23288
214.0	.00000
215.0	.02960
216.0	.27687
217.0	.09264
218.0	.15244
219.0	.26659
220.0	.37704
221.0	.23219
222.0	.23395
223.0	.28269
224.0	.20038
225.0	.29831
226.0	.21364
227.0	.00000
228.0	.00000
229.0	.28259
230.0	.08772
231.0	.29852
232.0	.19150
233.0	.00000
234.0	.07489
235.0	.00000
236.0	.24667
237.0	.12867
238.0	.03448
239.0	.15046
240.0	.37415
241.0	.28471
242.0	.00000
243.0	.03617
244.0	.03856
245.0	.36066
246.0	.00000

CL VALUES (10/4\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....23 (DPI-005)

DATE OF TRIAL...24 SEP 1978

FUNCTION TIME...13:26:1

ORSCIRANT.....DUST/DEBRIS

SECTION FROM FUNCTION	CENTER
247.0	.28554
248.0	.00837
249.0	.09700
250.0	.00000
251.0	.08594
252.0	.00000
253.0	.51084
254.0	.19842
255.0	.37737
256.0	.00000
257.0	.21671
258.0	.06795
259.0	.06680
260.0	.00037
261.0	.00000
262.0	.00000
263.0	.18789
264.0	.18441
265.0	.20511
266.0	.42067
267.0	.23274
268.0	.03045
269.0	.30629
270.0	.01774
271.0	.05734
272.0	.03908
273.0	.01285
274.0	.00000
275.0	.07793
276.0	.29935
277.0	.03343
278.0	.08700
279.0	.11807
280.0	.00000
281.0	.00000
282.0	.24758
283.0	.00000
284.0	.38154
285.0	.00215
286.0	.33423
287.0	.11991

CL VALUES (CM/IA\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER...23 (DP1-005)

DATE OF TRIAL...29 SEP 1978

FUNCTION TIME...13:26: 1

OBSCURANT...JST/DEARIS

SECONDS FROM FUNCTION	CENTER
288.0	.20905
289.0	.28218
290.0	.50204
291.0	.26186
292.0	.33939
293.0	.11367
294.0	.15941
295.0	.38209
296.0	.09984
297.0	.12915
298.0	.06921
299.0	.19911
300.0	.28787
301.0	.00000
302.0	.37260
303.0	.29004
304.0	.09341
305.0	.34760
306.0	.05762
307.0	.15335
308.0	.00000
309.0	.12857
310.0	.33385
311.0	.00000
312.0	.03910
313.0	.15874
314.0	.57160
315.0	.00000
316.0	.00557
317.0	.07063
318.0	.25751
319.0	.27998
320.0	.22749
321.0	.00000
322.0	.09488
323.0	.42188
324.0	.00000
325.0	.00000
326.0	.01461
327.0	.08390
328.0	.00000

CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER...23 (JPI-005)  
DATE OF TRIAL...29 SEP 1973  
FUNCTION TIME...15:26:1  
OBSERVANT.....JUST/DEARIS

SECONDS FROM FUNCTION	CENTER
329.0	.05167
330.0	.00000
331.0	.07286
332.0	.01835
333.0	.00000
334.0	.00320
335.0	.14024
336.0	.36523
337.0	.18163
339.0	.24991
339.0	.00000
340.0	.35756
341.0	.11002
342.0	.04233
343.0	.19306
344.0	.29543
345.0	.20299
346.0	.00000
347.0	.04333
348.0	.00000
349.0	.00000
350.0	.00000
351.0	.09344
352.0	.02472
353.0	.00000
354.0	.35785
355.0	.00000
356.0	.00000
357.0	.00489
358.0	.10677
359.0	.02503
360.0	.21276
361.0	.00000
362.0	.07289
363.0	.16675
364.0	.00556
365.0	.07338
366.0	.03941
367.0	.07964
368.0	.01402
369.0	.24396



CL VALUES (CM/442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....E5 (OP1-005)  
DATE OF TRIAL...29 SEP 1979  
FUNCTION TIME...13:26: 1  
OBSERVANT.....JUST/DERRIS

SECONDS FROM FUNCTION	CENTER
370.0	.00000
371.0	.05418
372.0	.14486
373.0	.13261

APPENDIX F . SECTION 6

CONTENTS

TRIAL: 01 , OPG DUST ADD-ON

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TRIAL 01, DPG DUST ADD-ON, 14 SEP 1978, 11:02:59, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSAGE (GM./MIN/M**3)
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.02628
2	15.00	.00	1.50	.01898
3	30.00	.00	1.50	.02227
4	45.00	.00	1.50	.02737
5	60.00	.00	1.50	.15385
6	75.00	.00	1.50	.35040
7	90.00	.00	1.50	.45958
8	105.00	.00	1.50	.48793
9	120.00	.00	1.50	.21717
10	135.00	.00	1.50	.06600
11	150.00	.00	1.50	.04490
12	165.00	.00	1.50	.03333
13	180.00	.00	1.50	.02465
14	195.00	.00	1.50	.02253
15	210.00	.00	1.50	.01933

DOSAGE ALONG SIGHT LINE: 29.31875 (GM./MIN/M\*\*2)

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 01, OPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: OT  
FUNCTION TIME 11102159

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

1.06	.927
2.09	.992
3.12	.998
4.14	1.000
5.16	.984
6.18	.992
7.20	.970
8.23	1.014
9.26	.955
10.28	1.017
11.29	.995
12.31	.977
13.33	.999
14.35	.998
15.37	1.002
16.42	.973
17.44	.978
18.46	.943
19.64	.827
20.73	.598
21.76	.554
22.79	.647
23.80	.721
24.83	.808
25.83	.797
26.85	.775
27.88	.863
28.93	.855
29.96	.906
31.00	.942
32.04	.907
33.05	.890
34.04	.885
35.07	.847
36.11	.847
37.14	.808
38.17	.847
39.20	.916
40.22	.908
41.27	.910

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 01. DPG DUST ADDON

DATE: 14 SEP 1974

OBSCURANT: DT

FUNCTION TIME 11102154

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

42.20	.917
43.31	.872
44.35	.874
45.40	.863
46.44	.821
47.48	.799
48.51	.718
49.54	.674
50.55	.606
51.52	.473
52.53	.450
53.55	.344
54.58	.312
55.60	.276
56.62	.219
57.67	.136
58.71	.117
59.75	.125
60.76	.082
61.78	.106
62.81	.097
63.86	.099
64.91	.095
65.95	.076
66.96	.120
68.00	.161
69.04	.161
70.09	.305
71.14	.290
72.17	.347
73.20	.369
74.24	.402
75.28	.429
76.30	.450
77.31	.238
78.33	.139
79.34	.076
80.28	.075
81.36	.047
82.37	.054

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW U

TRIAL 01, DPG DUST ADDON

DATE: 14 SEP 1978

OBSERVANT: DT

FUNCTION TIME 11802159

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

83.37	.036
84.39	.039
85.42	.053
86.46	.030
87.46	.014
88.46	.012
89.51	.017
90.56	.011
91.59	.012
92.63	.014
93.64	.027
94.63	.047
95.68	.085
96.70	.079
97.74	.073
98.77	.076
100.74	.061
101.82	.016
102.85	.011
103.90	.006
104.96	.005
105.98	.007
107.01	.011
108.07	.025
109.10	.037
110.13	.043
111.18	.037
112.21	.065
113.27	.075
114.32	.103
115.35	.173
116.38	.290
117.40	.267
118.42	.288
119.46	.399
120.49	.388
121.52	.346
122.53	.466
123.52	.524
124.52	.565

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG FOX 0

TRIAL 01, UPG JUST ADDON  
DATE: 14 SEP 1976  
OBSERVANT: DT  
FUNCTION TIME 11:02:59

TIME AFTER FUNCTION (SECONDS)	TRANSMITTANCE (0.4-0.7)
125.56	.519
126.61	.601
127.66	.562
128.70	.584
129.73	.619
130.75	.712
131.77	.751
132.79	.797
133.82	.796
134.85	.769
135.89	.828
136.92	.862
137.96	.885
138.99	.902
140.04	.939
141.09	.896
142.12	.904
143.12	.956
144.13	.936
145.17	.939
146.23	.930
147.28	.973
148.32	.976
149.34	.984
150.37	.932
151.42	.971
152.45	1.001
153.49	.951
154.52	.933
155.56	.954
156.59	.953
157.62	.965
158.68	.967
159.71	1.006
160.74	.966
161.79	.983
162.81	.985
163.83	1.004
164.88	.989
165.93	.966

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 01. DPG DUST ADDON

DATE: 14 SEP 1974

OBSERVANT: DT

FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

165.97	.980
166.63	.977
169.07	1.019
170.11	1.007
171.14	.995
172.16	1.017
173.18	.958
174.21	.986
175.24	.959
176.28	.940
177.34	.970
178.38	.987
179.42	.989
180.46	.953
181.52	1.019
182.56	1.009
183.58	.980
184.63	.969
185.69	1.005
186.72	.985
187.75	.982
188.80	.969
189.83	1.000
190.85	.997
191.88	1.006
192.90	.992
193.93	.969
194.95	1.023
195.94	1.031
196.90	.992
197.86	1.019
198.84	.995
199.83	1.016
200.81	1.020
201.80	.983
202.80	.974
203.77	1.027
204.74	.986
205.73	1.000
206.72	.990



TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL 01, DPG MUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DI  
FUNCTION TIME 11102154

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

207.72	1.005
208.71	.990
209.68	.986
210.67	1.019
211.66	.997
212.64	.970
213.63	.991
214.63	.971
215.61	.983
216.60	.986
217.60	1.028
218.58	.997
219.58	.991
220.57	.958
221.55	.975
222.55	.975
223.55	.978
224.55	.969
225.55	.959
226.53	1.007
227.52	.952
228.49	1.004
229.48	1.016
230.48	.971
231.46	.944
232.45	.977
233.42	.966
234.42	.946
235.41	.961
236.40	.962
237.40	1.005
238.39	.978
239.39	.969
240.37	.972

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL D1, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

42.28	-.480
43.31	-.470
44.35	-.476
45.40	-.470
46.44	-.467
47.48	-.467
48.51	-.463
49.54	-.460
50.55	-.450
51.52	-.427
52.53	-.421
53.55	-.365
54.58	-.332
55.60	-.362
56.62	-.294
57.67	-.225
58.71	-.198
59.75	-.161
60.76	-.143
61.78	-.177
62.81	-.163
63.86	-.186
64.91	-.171
65.95	-.118
66.96	-.197
68.00	-.223
69.04	-.309
70.09	-.379
71.14	-.370
72.17	-.395
73.20	-.399
74.24	-.402
75.28	-.397
76.30	-.410
77.31	-.310
78.33	-.230
79.34	-.176
80.28	-.189
81.36	-.113
82.37	-.098

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 01, DPG DUST ADDON  
DATE: 14 SEP 1970  
OBSCURANT: D1  
FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

83.37	-.077
84.34	-.105
85.42	-.142
86.46	-.043
87.46	-.048
88.48	-.040
89.51	-.054
90.56	-.029
91.54	-.030
92.63	-.031
93.64	-.071
94.63	-.131
95.66	-.198
96.70	-.191
97.74	-.160
98.77	-.105
100.74	-.148
101.82	-.049
102.85	-.035
103.90	-.021
104.96	-.015
105.98	-.020
107.01	-.040
108.07	-.084
109.10	-.113
110.13	-.129
111.18	-.110
112.21	-.107
113.27	-.160
114.32	-.234
115.35	-.295
116.38	-.334
117.40	-.331
118.42	-.346
119.46	-.355
120.44	-.348
121.52	-.355
122.53	-.384
123.52	-.431
124.52	-.440

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
(MEASURED ALONG ROW U)

TRIAL 01, DRG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11102159

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

125.50	-.420
126.01	-.343
127.00	-.397
128.70	-.413
129.73	-.453
130.75	-.400
131.77	-.434
132.74	-.434
133.02	-.450
134.05	-.441
135.04	-.454
136.92	-.421
137.40	-.471
138.99	-.474
140.04	-.403
141.04	-.401
142.12	-.400
143.12	-.400
144.13	-.402
145.17	-.403
146.23	-.400
147.20	-.402
148.32	-.400
149.34	-.405
150.37	-.403
151.42	-.402
152.45	-.400
153.49	-.401
154.52	-.401
155.50	-.401
156.54	-.405
157.02	-.400
158.00	-.404
159.71	-.400
160.74	-.400
161.79	-.407
162.81	-.407
163.93	-.404
164.00	-.400
165.43	-.400

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL 01, DPG/DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11:02:54

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

166.97	-.487
168.03	-.487
169.07	-.484
170.11	-.489
171.14	-.488
172.16	-.484
173.18	-.486
174.21	-.487
175.24	-.486
176.28	-.484
177.34	-.486
178.38	-.488
179.42	-.488
180.46	-.485
181.52	-.484
182.56	-.484
183.58	-.487
184.63	-.486
185.69	-.486
186.72	-.487
187.75	-.487
188.80	-.486
189.83	-.486
190.85	-.486
191.88	-.484
192.90	-.488
193.93	-.486
194.95	-.490
195.94	-.490
196.90	-.488
197.86	-.489
198.84	-.488
199.83	-.489
200.81	-.490
201.80	-.487
202.80	-.487
203.77	-.490
204.74	-.487
205.73	-.488
206.72	-.488

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 01, JPC DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

207.72	-.489
208.71	-.488
209.68	-.487
210.67	-.489
211.66	-.488
212.64	-.486
213.63	-.488
214.63	-.487
215.61	-.487
216.60	-.487
217.60	-.490
218.58	-.488
219.58	-.488
220.57	-.486
221.55	-.487
222.55	-.487
223.53	-.487
224.53	-.486
225.53	-.486
226.53	-.489
227.52	-.485
228.49	-.484
229.48	-.484
230.48	-.486
231.46	-.484
232.45	-.487
233.42	-.486
234.42	-.485
235.41	-.484
236.40	-.485
237.40	-.486
238.39	-.487
239.39	-.486
240.37	-.478

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW U

TRIAL D1, DPG DUST ADDON

DATE: 14 SEP 1978

UNSCUANT: DT

FUNCTION TIME 11102150

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	.000
2.00	.000
3.00	.000
4.00	.000
5.00	.000
6.00	.000
7.00	.000
8.00	.000
9.00	.000
10.00	.000
11.00	.000
12.00	.000
13.00	.000
14.00	.000
15.00	.000
16.00	.000
17.00	.000
18.00	.000
19.00	.000
20.00	.000
21.00	.000
22.00	.000
23.00	.000
24.00	.000
25.00	4.000
26.00	24.602
27.00	40.064
28.00	75.452
29.00	75.002
30.00	70.689
31.00	60.644
32.00	61.464
33.00	45.277
34.00	40.502
35.00	31.159
36.00	30.702
37.00	29.502
38.00	33.389
39.00	49.449
40.00	37.664

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG NO. 0

TRIAL 01, OPG DUST ADDON

DATE: 14 SEP 1978

OBSCURANT: 01

FUNCTION TIME 11:02:50

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	59.952
42.00	57.989
43.00	70.264
44.00	56.652
45.00	69.277
46.00	97.377
47.00	73.784
48.00	57.352
49.00	50.827
50.00	53.034
51.00	49.564
52.00	45.669
53.00	41.414
54.00	65.702
55.00	160.177
56.00	167.777
57.00	222.027
58.00	277.002
59.00	337.152
60.00	472.289
61.00	548.389
62.00	616.727
63.00	686.627
64.00	726.627
65.00	776.653
66.00	866.627
67.00	916.777
68.00	856.127
69.00	855.639
70.00	916.202
71.00	926.027
72.00	902.364
73.00	908.802
74.00	923.589
75.00	888.464
76.00	818.289
77.00	776.177
78.00	878.102
79.00	572.352
80.00	526.814



LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW D

TRIAL D1, DPG DUST ADDON

DATE: 14 SEP 1978

OBSCURANT: DT

FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

81.00	519.252
82.00	590.677
83.00	781.102
84.00	922.827
85.00	966.864
86.00	988.727
87.00	997.939
88.00	1002.952
89.00	1027.677
90.00	1050.452
91.00	984.239
92.00	1068.227
93.00	1155.989
94.00	1198.789
95.00	1188.052
96.00	1199.702
97.00	1190.139
98.00	1222.939
99.00	1241.664
100.00	1222.952
101.00	1199.952
102.00	1182.777
103.00	1195.914
104.00	1149.739
105.00	1162.952
106.00	1190.964
107.00	1216.577
108.00	1238.289
109.00	1248.739
110.00	1264.939
111.00	1260.577
112.00	1238.839
113.00	1208.027
114.00	1170.414
115.00	1170.352
116.00	1149.764
117.00	1065.489
118.00	1003.569
119.00	953.902
120.00	841.814

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG 40.0 U

TRIAL 01, UPG DUST ADDON

DATE: 14 SEP 1976

OBSCURANT: DT

FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	821.252
122.00	755.177
123.00	686.964
124.00	673.114
125.00	663.964
126.00	664.152
127.00	554.064
128.00	475.189
129.00	421.189
130.00	422.302
131.00	430.514
132.00	487.489
133.00	421.177
134.00	398.489
135.00	354.027
136.00	322.439
137.00	232.314
138.00	218.902
139.00	215.339
140.00	190.564
141.00	150.777
142.00	151.039
143.00	125.064
144.00	65.952
145.00	86.739
146.00	100.164
147.00	80.314
148.00	59.177
149.00	62.627
150.00	54.714
151.00	51.852
152.00	36.027
153.00	37.002
154.00	26.052
155.00	18.214
156.00	6.589
157.00	7.014
158.00	6.952
159.00	1.414
160.00	.000

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW U

TRIAL 01. DPG DUST ADDON

DATE: 14 SEP 1978

UNSCURANT: DT

FUNCTION TIME 11102154

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	.127
162.00	.000
163.00	.000
164.00	.000
165.00	.000
166.00	.000
167.00	.000
168.00	.000
169.00	.000
170.00	.000
171.00	.000
172.00	.000
173.00	.000
174.00	.000
175.00	.000
176.00	.000
177.00	.000
178.00	.000
179.00	.000
180.00	.000
181.00	.000
182.00	.000
183.00	.000
184.00	.000
185.00	.000
186.00	.000
187.00	.000
188.00	.000
189.00	.000
190.00	.000
191.00	.000
192.00	.000
193.00	.000
194.00	.000
195.00	.000
196.00	.000
197.00	.000
198.00	.000
199.00	.000
200.00	.000

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG HORN U

TRIAL 01, DPG DUST ADDON  
DATE: 14 SEP 1976  
OBSERVANT: OT  
FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

201.00	.000
202.00	.000
203.00	.000
204.00	.000
205.00	.000
206.00	.000
207.00	.000
208.00	.000
209.00	.000
210.00	.000
211.00	.000
212.00	.000
213.00	.000
214.00	.000
215.00	.000
216.00	.000
217.00	.000
218.00	.000
219.00	.000
220.00	.000
221.00	.000
222.00	.000
223.00	.000
224.00	.000
225.00	.000
226.00	.000
227.00	.000
228.00	.000
229.00	.000
230.00	.000
231.00	.314
232.00	1.364
233.00	1.177
234.00	2.439
235.00	3.927
236.00	10.702
237.00	8.614
238.00	11.177
239.00	11.127
240.00	12.652

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 01, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11:02:59

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.06	-.484
2.09	-.488
3.12	-.488
4.14	-.488
5.16	-.487
6.18	-.488
7.20	-.486
8.23	-.489
9.26	-.485
10.28	-.489
11.29	-.489
12.31	-.487
13.33	-.488
14.35	-.488
15.39	-.488
16.42	-.487
17.44	-.487
18.57	-.485
19.69	-.476
20.73	-.451
21.76	-.444
22.79	-.457
23.80	-.466
24.83	-.471
25.83	-.460
26.85	-.456
27.88	-.460
28.93	-.478
29.96	-.479
31.00	-.485
32.04	-.482
33.05	-.481
34.04	-.480
35.07	-.478
36.11	-.477
37.14	-.473
38.17	-.475
39.20	-.481
40.22	-.479
41.27	-.482

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....01 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11: 2:59  
OBSERVANT.....DUST/DEHRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
1.0	.967	.033
2.2	.995	.000
3.2	1.026	.000
4.2	1.006	.000
5.2	1.006	.006
6.2	1.001	.009
7.2	1.001	.000
8.3	.987	.004
9.2	.976	.012
10.3	1.023	.000
11.3	.987	.004
12.4	1.015	.000
13.4	1.001	.000
14.4	.973	.014
15.4	1.015	.000
16.5	.970	.010
17.5	.998	.000
18.5	.951	.000
19.6	.887	.043
20.8	.787	.114
21.8	.717	.164
22.9	.773	.124
23.7	.781	.134
24.8	.853	.043
25.8	.842	.091
26.9	.856	.096
28.0	.884	.061
29.0	.937	.024
30.0	.929	.045
31.0	.979	.025
31.9	.942	.051
33.1	.887	.090
34.0	.901	.096
35.0	.865	.106
36.1	.867	.104
37.2	.812	.143
38.2	.862	.124
39.2	.979	.041
40.3	.937	.070
41.2	.906	.092
42.4	.948	.063

TRANSMITTANCE AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER.....01 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11: 2:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SP/NM
43.3	.917	.084
44.4	.929	.076
45.4	.873	.131
46.5	.837	.173
47.5	.770	.220
48.6	.723	.253
49.6	.695	.289
50.4	.575	.389
51.5	.461	.486
52.5	.445	.513
53.5	.331	.609
54.5	.314	.637
55.6	.278	.678
56.5	.214	.739
57.6	.133	.796
58.8	.131	.814
59.7	.125	.833
60.8	.081	.865
61.8	.100	.867
62.8	.097	.869
63.9	.097	.869
64.7	.089	.890
66.0	.072	.886
67.0	.111	.843
68.1	.147	.802
69.1	.178	.749
70.2	.320	.633
71.1	.286	.641
72.1	.331	.594
73.3	.361	.572
74.3	.409	.539
75.4	.428	.556
76.2	.425	.589
77.1	.231	.743
78.3	.133	.843
79.4	.072	.402
80.2	.067	.906
81.4	.064	.922
82.3	.059	.918
83.3	.033	.945
84.4	.036	.943

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER FOR

TRIAL NUMBER....01 (OP1-005)  
DATE OF TRIAL...14 SEP 1970  
FUNCTION TIME...111 2:54  
OBSERVANT.....DUST/DEARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NN
85.3	.047	.935
86.2	.028	.965
87.2	.011	.977
88.5	.011	.977
89.5	.017	.973
90.5	.011	.977
91.5	.014	.959
92.7	.017	.941
93.6	.025	.920
94.4	.039	.894
95.8	.089	.859
96.6	.069	.888
97.6	.066	.908
98.8	.039	.926
99.6	.050	.916
100.5	.053	.931
101.6	.014	.954
102.6	.008	.963
103.6	.008	.963
104.9	.006	.981
105.7	.006	.965
106.4	.004	.932
107.9	.022	.906
109.2	.039	.894
110.2	.042	.892
111.3	.039	.879
112.3	.078	.836
113.2	.075	.822
114.3	.106	.785
115.4	.164	.743
116.4	.286	.641
117.5	.270	.637
118.5	.300	.615
119.5	.425	.527
120.5	.361	.556
121.6	.356	.529
122.6	.456	.443
123.6	.531	.389
124.6	.573	.360
125.6	.570	.346
126.6	.595	.328



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER...01 (OPI-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...111 2159  
OBSERVANT.....DUST/DEHNIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/NA
127.7	.573	.344
128.8	.617	.297
129.4	.645	.277
130.6	.681	.252
131.7	.767	.191
132.9	.790	.175
133.8	.812	.159
134.9	.787	.177
135.9	.823	.136
137.0	.892	.085
137.9	.878	.098
139.0	.878	.094
140.0	.912	.073
141.2	.906	.061
142.2	.915	.055
143.2	.931	.043
144.2	.956	.025
145.3	.954	.027
146.1	.923	.049
147.4	.945	.033
148.4	.967	.018
149.4	.973	.014
150.3	.970	.016
151.4	.976	.012
152.4	.990	.002
153.5	.987	.004
154.6	.948	.031
155.5	.951	.029
156.7	1.006	.000
157.7	1.001	.000
158.6	.973	.014
159.7	1.026	.000
160.6	.985	.019
161.4	.987	.004
162.8	.998	.000
163.9	1.006	.000
165.0	.984	.006
165.9	.998	.000
167.0	1.012	.000
168.1	1.023	.000
169.0	.976	.012

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER HON

TRIAL NUMBER....01 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...117 1159  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SH/NM
170.2	1.020	.000
171.2	.987	.004
172.2	.979	.010
173.3	.984	.008
174.3	.992	.000
175.2	.973	.014
176.4	1.009	.000
177.4	.976	.012
178.4	1.001	.000
179.5	1.029	.000
180.6	.984	.000
181.6	1.015	.006
182.5	1.012	.000
183.7	1.012	.000
184.6	.992	.000
185.6	.970	.016
186.8	.986	.006
187.7	.967	.018
188.9	.973	.000
189.9	1.004	.000
190.9	.965	.016
191.9	.962	.021
193.0	1.004	.000
194.0	1.001	.000
195.0	.998	.000
196.0	1.009	.004
198.8	1.012	.002
197.4	1.023	.000
198.9	1.006	.000
199.6	1.026	.000
200.9	1.009	.000
201.8	1.006	.000
202.8	.992	.015
203.7	.962	.037
204.8	.967	.018
205.8	1.034	.000
206.7	.990	.002
207.7	1.020	.000
208.8	1.004	.000
209.7	1.021	.009
210.7	.959	.039

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....01 (DM1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...114 2859  
OBSERVANT.....DUST/DEARIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/NM
211.7	.970	.016
212.7	1.004	.000
213.7	1.012	.000
214.7	1.026	.000
215.7	.984	.006
216.6	.979	.010
217.4	.992	.015
218.5	.954	.027
219.6	.962	.021
220.6	.995	.000
221.5	.979	.010
222.5	1.004	.000
223.5	.967	.018
224.6	.981	.008
225.6	1.006	.000
226.5	1.034	.000
227.5	1.015	.000
228.5	.970	.031
229.5	.981	.023
230.5	1.009	.004
231.5	.970	.031
232.4	.967	.033
233.5	.967	.018
234.5	.965	.019
235.4	.976	.012
236.5	.970	.016
237.5	.998	.000
238.5	.981	.023
239.4	.984	.021
240.4	.984	.021
241.4	.967	.019
242.4	.959	.023
243.3	.951	.029
244.2	.990	.002
245.2	1.020	.000
246.2	.984	.006
247.2	.973	.014
248.2	.976	.027
249.2	.984	.006
250.2	.981	.008
251.2	.984	.006

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....01 (001-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:2159  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
252.7	.971	.016
253.1	.976	.012
254.2	.954	.027
255.1	.942	.000
256.1	.944	.006
257.2	.944	.006
258.2	.942	.000
259.1	1.015	.000
260.1	.967	.018
261.1	1.056	.000
262.1	.967	.019
263.1	1.017	.000
263.9	1.009	.004
264.9	1.004	.000
266.0	.992	.000
266.9	.970	.016
268.0	1.034	.000
269.0	1.023	.006
269.6	.967	.019
270.9	1.020	.000
271.9	.945	.000
272.6	1.001	.009
273.6	1.001	.009
274.6	1.029	.000
275.6	1.026	.000
276.7	1.020	.000
277.7	1.005	.006
278.7	1.042	.000
279.6	.986	.006
280.7	.973	.014
281.6	1.015	.000
282.7	1.001	.000
283.6	1.020	.000
284.6	.967	.018
285.6	.959	.023
286.7	1.017	.000
287.7	.970	.016
288.7	1.004	.000
289.6	1.012	.002

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TOTAL NUMBER... 31 (001-005)  
 DATE OF TEST... 19 SEP 1974  
 FUNCTION TIME... 11:25:54  
 INSTRUMENT... JDS1000S

SECTION FROM FUNCTION	WAVELENGTH 5.000/CENTER	WAVELENGTH 4.750/CENTER
1.0	1.051	1.009
2.0	1.017	1.023
3.0	1.017	1.005
4.0	1.043	1.102
5.0	1.031	1.118
6.0	1.022	1.031
7.0	1.002	.954
8.0	1.004	1.015
9.0	1.011	1.059
10.0	.941	1.115
11.0	.984	.944
12.0	1.027	.947
13.0	1.008	1.024
14.0	1.102	1.104
15.0	1.027	1.004
16.0	1.031	1.063
17.0	1.015	.982
18.0	.972	1.081
19.0	1.019	1.034
20.0	1.030	.961
21.0	1.005	1.100
22.0	.941	.924
23.0	.907	.885
24.0	.927	1.013
25.0	.934	1.043
26.0	.951	.932
27.0	.960	.933
28.0	.938	.900
29.0	.922	.896
30.0	.956	.851
31.0	.982	.898
32.0	.976	.913
33.0	1.008	.875
34.0	.977	.951
35.0	.971	.990
36.0	.954	.974
37.0	.885	.882
38.0	.890	.871
39.0	.898	.904
40.0	.923	1.027
41.0	.884	1.036

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....01 (DP1-005)

DATE OF TRIAL...14 SEP 1978

FUNCTION TIME...11: 2:54

DISCREPANCY.....0.051/0.0918

SECTION 1 WAVELENGTH WAVELENGTH  
FROM 3.143/CENTER 2.750/CENTER  
FUNCTION

42.0	.943	.969
43.0	.972	.920
44.0	.898	.915
45.0	.910	.859
46.0	.949	.916
47.0	.936	.966
48.0	.864	.812
49.0	.880	.893
50.0	.755	.734
51.0	.712	.747
52.0	.567	.715
53.0	.545	.619
54.0	.517	.501
55.0	.450	.585
56.0	.542	.483
57.0	.567	.511
58.0	.306	.398
59.0	.203	.308
60.0	.158	.257
61.0	.172	.305
62.0	.136	.264
63.0	.144	.276
64.0	.155	.236
65.0	.127	.221
66.0	.140	.230
67.0	.121	.203
68.0	.129	.236
69.0	.180	.239
70.0	.220	.374
71.0	.273	.412
72.0	.386	.512
73.0	.394	.561
74.0	.437	.524
75.0	.457	.626
76.0	.484	.687
77.0	.497	.601
78.0	.422	.558
79.0	.230	.327
80.0	.133	.212
81.0	.112	.206
82.0	.085	.160

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (OPI-005)  
 DATE OF TRIAL...14 SEP 1974  
 FUNCTION TIME...11: 2:54  
 UNSUBSTANT.....DUST/DEBRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.443/CENTER 9.750/CENTER  
 FUNCTION

83.0	.085	.159
84.0	.083	.172
85.0	.056	.126
86.0	.058	.149
87.0	.089	.177
88.0	.007	.123
89.0	.021	.078
90.0	.022	.086
91.0	.023	.079
92.0	.024	.095
93.0	.022	.088
94.0	.023	.105
95.0	.036	.125
96.0	.057	.146
97.0	.116	.221
98.0	.094	.182
99.0	.080	.154
100.0	.054	.128
101.0	.077	.159
102.0	.057	.113
103.0	.025	.060
104.0	.013	.055
105.0	.013	.054
106.0	.009	.038
107.0	.009	.032
108.0	.015	.045
109.0	.040	.117
110.0	.042	.120
111.0	.072	.165
112.0	.058	.147
113.0	.070	.154
114.0	.127	.256
115.0	.139	.263
116.0	.180	.290
117.0	.257	.366
118.0	.334	.505
119.0	.372	.493
120.0	.368	.465
121.0	.466	.641
122.0	.429	.523
123.0	.454	.575

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....01 (001-005)

DATE OF TRIAL...14 SEP 1974

FUNCTION TIME...11: 2:52

DISCUSSION.....JUST FOR INFO

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 2.750/CENTER
-----------------------------	----------------------------	----------------------------

124.0	.523	.600
125.0	.574	.614
126.0	.583	.681
127.0	.624	.757
128.0	.646	.756
129.0	.637	.679
130.0	.680	.789
131.0	.682	.745
132.0	.744	.708
133.0	.775	.856
134.0	.839	.917
135.0	.821	.785
136.0	.828	.848
137.0	.856	.861
138.0	.845	.921
139.0	.910	.903
140.0	.874	.820
141.0	.906	.946
142.0	.901	.931
143.0	.942	.999
144.0	.967	.891
145.0	.928	.869
146.0	.977	.936
147.0	1.008	.961
148.0	.982	1.059
149.0	.973	.986
150.0	.944	.995
151.0	1.017	.942
152.0	.984	.981
153.0	1.024	1.008
154.0	1.054	1.073
155.0	.986	.952
156.0	.987	1.008
157.0	.982	.990
158.0	1.009	1.043
159.0	1.027	1.103
160.0	.991	.965
161.0	1.032	.941
162.0	.993	1.031
163.0	1.027	1.114
164.0	1.027	1.062



# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (001-005)  
 DATE OF TRIAL....14 SEP 1978  
 FUNCTION TYPE....11: 2:59  
 UNSCOWANT.....JUST/DEARIS

SECONDS  
 FRJH  
 FUNCTION

WAVELENGTH WAVELENGTH  
 3.443/CENTER 9.750/CENTER

165.0	1.008	.972
166.0	1.008	1.056
167.0	1.036	1.000
168.0	1.006	1.009
169.0	.986	1.053
170.0	1.045	1.004
171.0	1.060	1.096
172.0	1.047	1.037
173.0	.781	.933
174.0	1.030	.891
175.0	1.036	1.003
176.0	1.034	1.121
177.0	.992	1.005
178.0	1.025	1.059
179.0	.998	1.005
180.0	.984	.967
181.0	1.014	1.094
182.0	1.040	1.125
183.0	.992	.981
184.0	1.014	1.102
185.0	.997	1.017
186.0	.989	.857
187.0	1.007	.872
188.0	1.011	.895
189.0	.991	.999
190.0	1.011	.923
191.0	1.019	.977
192.0	1.001	.874
193.0	1.008	.919
194.0	.941	.972
195.0	.991	.936
196.0	.969	.923
197.0	1.020	.957
198.0	.991	.922
199.0	.976	.942
200.0	1.052	.974
201.0	1.033	1.026
202.0	.999	.940
203.0	1.034	.913
204.0	1.029	.957
205.0	.990	1.025

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (001-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11: 2:59  
 INSTRUMENT.....DUST/DEBRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.145/CENTER 4.750/CENTER  
 FUNCTION

205.0	1.009	1.041
207.0	1.064	1.014
208.0	1.013	1.087
209.0	1.001	1.053
210.0	1.004	.899
211.0	1.011	1.062
212.0	1.071	1.069
213.0	.991	1.028
214.0	1.009	.966
215.0	.971	1.009
216.0	1.029	.941
217.0	1.026	1.049
218.0	1.020	1.027
219.0	.969	.937
220.0	1.013	.903
221.0	.989	.982
222.0	.974	1.139
223.0	.993	1.019
224.0	1.041	.932
225.0	1.011	1.063
226.0	.986	1.025
227.0	.994	1.044
228.0	1.015	.998
229.0	1.033	1.030
230.0	.994	.946
231.0	.999	.948
232.0	.965	.900
233.0	.982	.917
234.0	.987	.979
235.0	.980	1.077
236.0	1.010	.968
237.0	.975	.989
238.0	.945	.970
239.0	1.003	.977
240.0	.949	1.057
241.0	.947	.964
242.0	1.017	.998
243.0	.994	1.021
244.0	1.019	1.001
245.0	.973	.948
246.0	1.003	.902

# TRANS-ILLIANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (091-005)  
 DATE OF TRIAL...14 SEP 1978  
 POSITION TIME...11: 2859  
 OBSERVANT.....DIST/DEFWIS

SECONDS  
 FROM  
 POSITION

WAVELENGTH WAVELENGTH  
 3.445/LENTEN 4.750/CENTER

247.0	1.033	1.003
248.0	1.024	.947
249.0	1.001	.962
250.0	1.004	.845
251.0	1.011	.931
252.0	.981	.852
253.0	.998	.961
254.0	1.036	1.004
255.0	.992	.965
256.0	1.034	.903
257.0	1.035	1.032
258.0	1.029	.993
259.0	1.007	.849
260.0	.958	.930
261.0	1.006	.982
262.0	1.011	.949
263.0	1.027	.991
264.0	1.000	.971
265.0	1.002	.907
266.0	1.006	1.003
267.0	.992	.899
268.0	1.040	.929
269.0	1.004	.921
270.0	1.016	.909
271.0	1.033	1.001
272.0	1.006	1.037
273.0	1.005	.849
274.0	1.001	.928
275.0	1.011	.887
276.0	1.020	1.022
277.0	1.049	.844
278.0	.991	.984
279.0	1.024	1.034
280.0	1.030	.905
281.0	1.036	.997
282.0	.978	.895
283.0	1.022	.972
284.0	1.004	.861
285.0	1.017	.945
286.0	.942	.977
287.0	1.019	.961

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER.....01 (DPI-005)  
 DATE OF TRIAL.....14 SEP 1978  
 FUNCTION TIME.....11: 2859  
 OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 5.445/CENTER	WAVELENGTH 9.750/CENTER
243.0	1.012	.946
253.0	1.009	.962
290.0	1.028	.951

CL VALUES (5470002) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....01 (DPI-005)  
DATE OF TRIAL...14 SEP 1974  
FUNDING LINE...VIR 2:49  
DISCOUNT.....005504RIS

SECONDS FROM FUNCTION	CL VALUE
1.0	.00000
2.0	.00000
3.0	.00000
4.0	.00000
5.0	.00000
6.0	.00000
7.0	.00000
8.0	.00000
9.0	.00000
10.0	.20571
11.0	.17560
12.0	.00000
13.0	.00000
14.0	.00000
15.0	.00000
16.0	.00000
17.0	.00000
18.0	.29891
19.0	.00000
20.0	.00000
21.0	.00000
22.0	1.22894
23.0	1.03110
24.0	.80780
25.0	.67760
26.0	.53612
27.0	.21399
28.0	.66192
29.0	.86506
30.0	.36437
31.0	.19589
32.0	.26205
33.0	.00000
34.0	.24871
35.0	.31239
36.0	.46099
37.0	1.30320
38.0	1.13026
39.0	1.14331
40.0	.85422
41.0	1.25116

CL VALUES (G174442) WACA CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....01 (DPI-005)  
DATE OF TRIAL...14 SEP 1975  
FUNCTION TIME.....11: 2559  
CHSCORR.F.....JUST/DERRIS

SECONDS FROM FUNCTION	CENTER
42.0	.52674
43.0	.24759
44.0	1.17238
45.0	.49635
46.0	.35444
47.0	.70154
48.0	1.50731
49.0	1.35375
50.0	2.46950
51.0	3.60614
52.0	4.24696
53.0	5.43863
54.0	5.99609
55.0	5.47437
56.0	9.93640
57.0	10.54724
58.0	12.59171
59.0	16.96397
60.0	19.62069
61.0	18.67791
62.0	21.17698
63.0	20.59018
64.0	19.79215
65.0	21.92971
66.0	20.86514
67.0	22.41717
68.0	21.76074
69.0	19.48579
70.0	16.09073
71.0	13.77674
72.0	10.10695
73.0	9.88426
74.0	9.79511
75.0	4.32452
76.0	7.59471
77.0	7.43014
78.0	9.15845
79.0	15.59247
80.0	21.44522
81.0	23.25866
82.0	26.13980

CL VALUES (507/4002) DATA CALCULATED USING TRANSMITTANCE  
AND REFLECTIVITY COEFFICIENT

TRIAL NUMBER.....01 (001-005)

DATE OF TRIAL.....14 SEP 1974

FINISHING TIME.....11: 2:54

DESCRIPTION.....JUST FOR DATA

SECTIONS FROM POSITION	Coeff
83.0	25.22242
84.0	25.64914
85.0	30.28157
86.0	30.29562
87.0	25.54447
88.0	32.39075
89.0	40.92903
90.0	40.42220
91.0	39.06065
92.0	39.53063
93.0	40.51540
94.0	40.26132
95.0	35.27250
96.0	30.42376
97.0	22.72506
98.0	25.14979
99.0	26.46224
100.0	31.00270
101.0	27.20580
102.0	30.40381
103.0	39.17098
104.0	45.74968
105.0	45.42702
106.0	49.57497
107.0	50.07632
108.0	44.85827
109.0	34.07725
110.0	33.62846
111.0	27.94762
112.0	30.23241
113.0	28.28212
114.0	21.95499
115.0	20.94906
116.0	18.19896
117.0	14.41245
118.0	11.66289
119.0	10.51808
120.0	10.51474
121.0	8.11752
122.0	8.99777
123.0	8.39126

CL VALUES (GMZ\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER...01 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
EXPOSITION TIME...11: 2:59  
DISBURANT.....DUST/DEBRIS

SECONDS FROM EXPOSITION	CENTER
120.0	6.46538
125.0	5.80361
126.0	4.37257
127.0	4.93438
128.0	4.64596
129.0	4.78257
130.0	4.09035
131.0	4.25643
132.0	3.13976
133.0	2.70217
134.0	1.86796
135.0	2.09575
136.0	2.00652
137.0	1.44703
138.0	1.78797
139.0	1.00407
140.0	1.43590
141.0	1.05135
142.0	1.11029
143.0	.63666
144.0	.36083
145.0	.79941
146.0	.24688
147.0	.00000
148.0	.19511
149.0	.29012
150.0	.61611
151.0	.00000
152.0	.17604
153.0	.00000
154.0	.00000
155.0	.15476
156.0	.13797
157.0	.18950
158.0	.00000
159.0	.00000
160.0	.09213
161.0	.00000
162.0	.07242
163.0	.00000
164.0	.00000



CL VALUES (G4/N\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....01 (OP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11: 2:59  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
165.0	.00000
166.0	.00000
167.0	.00000
168.0	.00000
169.0	.15204
170.0	.00000
171.0	.00000
172.0	.00000
173.0	.19896
174.0	.00000
175.0	.00000
176.0	.00000
177.0	.05045
178.0	.00000
179.0	.01654
180.0	.16483
181.0	.00000
182.0	.00000
183.0	.08356
184.0	.00000
185.0	.03351
186.0	.12071
187.0	.00000
188.0	.00000
189.0	.07951
190.0	.00000
191.0	.00000
192.0	.00000
193.0	.00000
194.0	.04690
195.0	.09290
196.0	.33721
197.0	.00000
198.0	.09520
199.0	.25330
200.0	.00000
201.0	.00000
202.0	.00633
203.0	.00000
204.0	.00000
205.0	.10843

CE VALUES (GM/CM<sup>2</sup>) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....01 (DPI-005)

DATE OF TRIAL...14 SEP 1978

EXPOSURE TIME...11: 2:59

LABORATORY.....DIST/DEMPIS

SECTIONS FROM FUNCTION	CENTER
205.0	.00000
207.0	.00000
208.0	.00000
209.0	.00000
210.0	.00000
211.0	.00000
212.0	.00000
213.0	.09539
214.0	.00000
215.0	.51709
216.0	.00000
217.0	.00000
218.0	.00000
219.0	.12075
220.0	.00000
221.0	.11975
222.0	.27705
223.0	.07930
224.0	.00000
225.0	.00000
226.0	.14671
227.0	.06816
228.0	.00000
229.0	.00000
230.0	.06057
231.0	.01124
232.0	.38052
233.0	.19597
234.0	.13055
235.0	.21515
236.0	.00000
237.0	.27016
238.0	.16006
239.0	.00000
240.0	.01065
241.0	.03329
242.0	.00000
243.0	.06134
244.0	.00000
245.0	.28814
246.0	.00000

CL VALUES (CMH 442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTRACTION COEFFICIENT

INITIAL NUMBER.....001 (001-005)  
DATE OF INITIAL.....SEP 1974  
EXPOSITION TIME.....11: 2359  
DISCUSSANT.....JOSIE DEARIS

SECTIONS	
FUNCTION	CENTER
247.0	.00000
248.0	.00000
249.0	.00000
250.0	.00000
251.0	.00000
252.0	.20039
253.0	.01555
254.0	.00000
255.0	.28519
256.0	.30000
257.0	.00000
258.0	.00000
259.0	.00000
260.0	.45055
261.0	.00000
262.0	.00000
263.0	.00000
264.0	.00000
265.0	.00000
266.0	.00000
267.0	.00000
268.0	.00000
269.0	.00000
270.0	.00000
271.0	.00000
272.0	.00000
273.0	.00000
274.0	.00000
275.0	.00000
276.0	.00000
277.0	.00000
278.0	.00950
279.0	.00000
280.0	.00000
281.0	.00000
282.0	.23540
283.0	.00000
284.0	.00000
285.0	.00000
286.0	.003283
287.0	.00000

CC VALUES (10/24/72) WERE CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....01 (CPI-005)  
DATE OF TRIAL.....14 SEP 1974  
FUNCTION TIME.....11: 25.5  
ANALYST.....JOSIE HARRIS

SECTIONS	
FRON	
FUNCTION:	CENTER
259.0	.00000
259.0	.00000
259.0	.00000

APPENDIX F. SECTION 7

CONTENTS

TRIAL: D2 , DPG DUST ADD-ON

PAGE

No Data	TABLE: DOSAGE VERSUS DISTANCE ALONG CENTER ROW
F-7-2	TABLE: TRANSMITTANCE FOR WAVELENGTH BETWEEN 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-7-7	TABLE: CONTRAST RATIO FOR WAVELENGTH BETWEEN 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-7-12	TABLE: LUMINANCE FOR WAVELENGTH 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
F-7-17	TABLE: TRANSMITTANCE AND CLOUD LUMINANCE FOR WAVELENGTH 1.060 $\mu\text{m}$ LOCATED ON CENTER ROW
F-7-23	TABLE: TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION
F-7-29	TABLE: CL VALUES ( $\text{GM}/\text{m}^2$ ) BACK CALCULATED USING TRANSMITTANCE AND EXTINCTION COEFFICIENT

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1970  
OBSERVANT: DT  
FUNCTION TIME 11:24:00

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

1.24	1.013
2.24	1.022
3.26	1.031
4.30	.952
5.35	1.000
6.41	.945
7.45	1.000
8.44	.988
9.47	1.003
10.40	1.012
11.40	.983
12.50	1.009
13.55	.992
14.01	.993
15.05	1.033
16.04	.996
17.73	.945
18.75	.984
19.00	.969
20.84	.933
21.57	.987
22.00	.992
23.92	1.001
24.97	1.019
26.01	.995
27.06	1.013
28.11	1.002
29.10	.993
30.21	.894
31.21	.500
32.26	.417
33.25	.243
34.25	.134
35.22	.160
36.17	.126
37.22	.122
38.23	.061
39.19	.063
40.07	.050
41.15	.080

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN U

TRIAL 02, DPG DUST 4000M

DATE: 14 SEP 1978

OBSCURANT: DI

FUNCTION TIME 11124:00

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

42.15	.109
43.15	.091
44.15	.086
45.14	.127
46.16	.151
47.18	.178
48.18	.105
49.18	.038
50.04	.046
51.23	.040
52.28	.055
53.24	.089
54.31	.070
55.31	.053
56.33	.081
57.34	.106
58.36	.116
59.32	.095
60.35	.076
61.28	.062
62.34	.060
63.37	.107
64.38	.074
65.39	.034
66.40	.050
67.40	.028
68.43	.041
69.47	.033
70.46	.030
71.57	.036
72.61	.112
73.63	.060
74.66	.044
75.69	.040
76.71	.041
77.73	.043
78.72	.048
79.71	.103
80.71	.083
81.74	.124

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: UT  
FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

82.75	.156
83.75	.150
84.77	.084
85.71	.105
86.77	.065
87.77	.054
88.77	.043
89.76	.055
90.75	.067
91.76	.070
92.74	.125
93.81	.082
94.75	.204
95.88	.111
96.90	.162
97.92	.148
98.84	.083
99.95	.093
100.97	.156
102.00	.093
103.05	.104
104.04	.130
105.12	.090
106.15	.087
107.18	.094
108.21	.197
109.18	.244
110.14	.252
111.23	.267
112.24	.310
113.33	.317
114.38	.250
115.43	.292
116.47	.308
117.52	.314
118.56	.479
119.59	.347
120.62	.424
121.64	.454
122.64	.532



TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG NON O

TRIAL 02, DPG DUST ADDON

DATE: 14 SEP 1975

OBSERVANT: DI

FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

123.02	.493
124.04	.550
125.06	.607
126.07	.739
127.08	.734
128.09	.689
129.12	.734
130.16	.736
131.17	.706
132.16	.621
133.18	.647
134.17	.634
135.18	.690
136.00	.901
137.02	.929
138.02	.951
139.05	.917
140.09	.940
141.43	.925
142.90	.931
143.95	.934
144.97	.940
145.99	.964
147.00	.960
148.03	.938
149.08	.977
150.13	.944
151.14	.995
152.13	.957
153.10	.975
154.20	.954
155.24	.972
156.30	.989
157.35	.929
158.39	.974
159.43	1.019
160.49	.991
161.51	.994
162.49	.981
163.53	.994

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG RUN 0

TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1978  
UNSCURANT: DT  
FUNCTION TIME 11:24:00

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

164.60	.975
165.04	.984
166.70	.987
167.73	1.007
168.74	.947
169.76	1.010
170.62	.990
171.65	.961
172.90	.980
173.93	1.032
174.97	.946
176.00	1.011
177.01	.963
178.02	.992
179.07	.992

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW U

TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.24	-.352
2.24	-.353
3.26	-.353
4.30	-.353
5.35	-.350
6.41	-.352
7.45	-.352
8.44	-.353
9.47	-.352
10.46	-.352
11.48	-.353
12.50	-.352
13.55	-.353
14.61	-.352
15.65	-.352
16.69	-.354
17.73	-.351
18.75	-.352
19.80	-.351
20.84	-.351
21.87	-.352
22.88	-.352
23.92	-.352
24.97	-.352
26.01	-.353
27.06	-.352
28.11	-.353
29.16	-.353
30.21	-.352
31.21	-.335
32.26	-.323
33.25	-.302
34.25	-.247
35.22	-.173
36.17	-.171
37.22	-.159
38.23	-.175
39.19	-.095
40.07	-.108
41.15	-.105
	-.141

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 02, UPG DUST ARJON  
DATE: 14 SEP 1974  
UNSCURANT: OT  
FUNCTION TIME 11:24:00

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

42.15	-.175
43.15	-.151
44.15	-.154
45.14	-.188
46.16	-.206
47.16	-.217
48.18	-.172
49.19	-.085
50.09	-.100
51.23	-.084
52.28	-.107
53.24	-.115
54.31	-.135
55.31	-.107
56.33	-.140
57.34	-.169
58.36	-.164
59.32	-.151
60.35	-.122
61.28	-.121
62.34	-.114
63.37	-.176
64.38	-.137
65.39	-.072
66.40	-.104
67.40	-.060
68.43	-.084
69.47	-.073
70.46	-.069
71.57	-.069
72.61	-.173
73.63	-.147
74.66	-.074
75.69	-.074
76.71	-.062
77.73	-.077
78.72	-.083
79.71	-.173
80.71	-.140
81.74	-.184

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW G

TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSCURANT: DI  
FUNCTION TIME 11:24:00

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

82.75	-.206
83.75	-.191
84.77	-.130
85.71	-.150
86.77	-.089
87.77	-.081
88.77	-.085
89.76	-.106
90.75	-.115
91.76	-.120
92.74	-.173
93.81	-.145
94.75	-.209
95.88	-.172
96.90	-.149
97.92	-.207
98.84	-.145
99.95	-.128
100.97	-.202
102.00	-.163
103.05	-.170
104.09	-.194
105.12	-.149
106.15	-.153
107.18	-.163
108.21	-.232
109.18	-.250
110.19	-.259
111.23	-.255
112.24	-.261
113.33	-.253
114.38	-.191
115.43	-.257
116.47	-.274
117.52	-.279
118.56	-.292
119.59	-.232
120.62	-.236
121.64	-.264
122.64	-.274

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 11

TRIAL 02, UPG DUST ADDON  
DATE: 14 SEP 1974  
OBSCURANTS: 01  
FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

123.02	-.300
124.04	-.320
125.06	-.330
126.07	-.329
127.08	-.280
128.09	-.315
129.72	-.306
130.76	-.314
131.77	-.292
132.76	-.307
133.78	-.310
134.77	-.329
135.78	-.321
136.80	-.340
137.82	-.346
138.82	-.341
139.85	-.337
140.84	-.343
141.93	-.333
142.96	-.341
143.95	-.331
144.97	-.346
145.94	-.341
147.00	-.351
148.03	-.350
149.08	-.351
150.13	-.350
151.14	-.352
152.18	-.351
153.16	-.351
154.20	-.350
155.24	-.351
156.30	-.350
157.35	-.344
158.39	-.350
159.43	-.353
160.44	-.352
161.51	-.351
162.44	-.351
163.53	-.351

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 02, DPG DUST ADDON  
DATE: 14 SEP 1976  
OBSERVANT: DT  
FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

164.60	-.351
165.64	-.350
166.70	-.351
167.73	-.352
168.74	-.351
169.78	-.352
170.82	-.352
171.85	-.351
172.90	-.352
173.93	-.354
174.97	-.352
176.00	-.353
177.01	-.352
178.02	-.352
179.07	-.352

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW D

TRIAL 02, DPG DUST ADDON

DATE: 14 SEP 1974

OBSCURANT: DI

FUNCTION TIME 11:24:00

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	6.428
2.00	12.253
3.00	10.191
4.00	8.491
5.00	8.791
6.00	7.216
7.00	5.353
8.00	4.716
9.00	3.178
10.00	6.741
11.00	5.378
12.00	5.728
13.00	6.166
14.00	4.616
15.00	3.941
16.00	3.641
17.00	1.728
18.00	1.791
19.00	.000
20.00	.000
21.00	.000
22.00	.000
23.00	.000
24.00	.000
25.00	.000
26.00	.000
27.00	.000
28.00	.000
29.00	.000
30.00	.000
31.00	.000
32.00	.000
33.00	.441
34.00	31.928
35.00	112.928
36.00	287.991
37.00	460.591
38.00	511.066
39.00	647.153
40.00	740.866



LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 11

TRIAL 02, DPG DUST ADDON

DATE: 14 SEP 1978

OBSERVANT: DT

FUNCTION TIME 11:24:00

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	743.466
42.00	818.091
43.00	838.478
44.00	890.066
45.00	880.378
46.00	851.641
47.00	875.428
48.00	919.741
49.00	930.803
50.00	911.516
51.00	901.878
52.00	865.116
53.00	836.828
54.00	980.341
55.00	984.078
56.00	970.141
57.00	943.666
58.00	979.241
59.00	934.191
60.00	968.978
61.00	915.366
62.00	929.241
63.00	953.353
64.00	954.941
65.00	962.966
66.00	991.116
67.00	981.941
68.00	1007.741
69.00	1029.228
70.00	1044.116
71.00	1034.203
72.00	1065.891
73.00	1075.216
74.00	1073.178
75.00	1117.966
76.00	1088.316
77.00	1028.128
78.00	997.153
79.00	1029.816
80.00	1030.403

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW U.

TRIAL D2, DPG DUST ADDON

DATE: 14 SEP 1974

UNSCURANT: DT

FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

81.00	1043.603
82.00	1037.266
83.00	1029.541
84.00	1024.941
85.00	999.141
86.00	970.816
87.00	910.278
88.00	961.441
89.00	976.441
90.00	987.828
91.00	967.766
92.00	948.916
93.00	929.778
94.00	924.753
95.00	958.866
96.00	965.903
97.00	938.566
98.00	911.141
99.00	904.291
100.00	870.341
101.00	860.816
102.00	856.666
103.00	879.428
104.00	939.653
105.00	960.966
106.00	891.203
107.00	906.928
108.00	902.791
109.00	921.066
110.00	881.028
111.00	874.666
112.00	935.503
113.00	888.066
114.00	814.653
115.00	631.416
116.00	599.841
117.00	592.103
118.00	593.053
119.00	631.216
120.00	762.478

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 02, DPG DUST ADDON

DATE: 14 SEP 1978

OBSCURANT: 01

FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	789.878
122.00	713.603
123.00	626.541
124.00	603.241
125.00	605.266
126.00	596.178
127.00	578.466
128.00	444.428
129.00	406.891
130.00	466.816
131.00	513.003
132.00	431.716
133.00	356.078
134.00	283.591
135.00	253.953
136.00	199.603
137.00	185.366
138.00	179.191
139.00	161.303
140.00	140.603
141.00	152.353
142.00	124.878
143.00	110.378
144.00	78.616
145.00	84.616
146.00	68.416
147.00	54.541
148.00	43.491
149.00	40.803
150.00	35.650
151.00	31.116
152.00	27.003
153.00	27.553
154.00	27.203
155.00	29.016
156.00	28.041
157.00	19.966
158.00	21.403
159.00	17.916
160.00	20.153

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 02, DPG DUST ADDON

DATE: 14 SEP 1978

OBSCURANT: DT

FUNCTION TIME 11124100

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	19.728
162.00	15.241
163.00	16.441
164.00	12.916
165.00	12.553
166.00	6.978
167.00	6.028
168.00	4.528
169.00	1.066
170.00	.000
171.00	.000
172.00	.000
173.00	.000
174.00	.000
175.00	.000
176.00	.000
177.00	.000
178.00	.000
179.00	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER HORN

TRIAL NUMBER....02 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11123159  
OBSERVANT.....DUST/DEHWIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
1.2	.970	.023
2.3	1.013	.000
3.3	.999	.007
4.3	1.010	.000
5.3	.973	.006
6.5	1.004	.000
7.5	.999	.000
8.5	.973	.021
9.5	1.021	.006
10.5	.996	.022
11.4	.990	.010
12.6	1.010	.000
13.6	.990	.000
14.6	1.013	.000
15.7	.990	.000
16.8	.996	.007
17.7	1.038	.000
18.8	.987	.000
19.8	1.013	.000
20.9	.982	.000
21.8	1.004	.001
23.0	1.002	.003
24.0	1.027	.000
25.0	1.021	.000
26.1	1.010	.000
27.1	.990	.010
28.1	1.027	.000
29.1	.976	.020
30.2	.987	.028
31.3	.687	.255
32.2	.566	.350
33.3	.416	.479
34.3	.252	.601
35.2	.136	.693
36.2	.161	.692
37.1	.124	.716
38.3	.127	.730
39.1	.062	.788
40.2	.062	.788
41.0	.051	.795
42.1	.076	.778

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....02 (OP1-005)  
DATE OF TRIAL...14 SEP 1976  
FUNCTION TIME...11123159  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
43.2	.105	.744
44.0	.088	.755
45.2	.085	.757
46.2	.124	.716
47.3	.167	.688
48.3	.178	.712
49.2	.105	.776
50.3	.040	.834
51.0	.048	.813
52.3	.045	.799
53.4	.068	.784
54.4	.091	.769
55.4	.071	.782
56.1	.048	.813
57.3	.076	.794
58.4	.102	.777
59.4	.116	.768
60.2	.088	.802
61.3	.068	.815
62.2	.054	.824
63.4	.051	.826
64.5	.110	.788
65.4	.074	.812
66.4	.034	.837
67.4	.045	.830
68.3	.028	.841
69.4	.040	.834
70.3	.034	.837
71.4	.028	.841
72.7	.040	.818
73.6	.099	.775
74.5	.074	.812
75.5	.048	.813
76.6	.040	.802
77.8	.045	.783
78.8	.042	.769
79.8	.051	.764
80.7	.096	.719
81.7	.082	.728
82.8	.127	.698
83.8	.156	.695

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....02 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11123159  
OBSERVANT.....DUST/DENNIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SP/NM
84.7	.124	.747
85.9	.085	.789
86.6	.099	.779
87.8	.065	.786
88.9	.059	.789
89.7	.045	.799
90.8	.057	.776
91.7	.062	.756
92.9	.079	.730
93.8	.119	.688
94.9	.091	.707
95.7	.209	.629
96.8	.110	.678
98.0	.209	.614
98.8	.198	.637
99.7	.086	.724
101.1	.105	.697
102.1	.153	.666
103.1	.099	.717
104.1	.110	.709
105.1	.133	.695
106.2	.102	.715
107.0	.091	.722
108.1	.096	.703
109.3	.209	.629
110.2	.243	.607
111.2	.257	.598
112.4	.303	.564
113.3	.323	.555
114.4	.325	.553
115.3	.249	.603
116.5	.323	.555
117.6	.331	.534
118.5	.323	.524
119.7	.467	.430
120.7	.402	.457
121.6	.399	.454
122.7	.444	.413
123.6	.518	.365
124.7	.498	.378
125.7	.555	.341

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....02 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:23:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
126.0	.654	.277
127.7	.719	.234
128.7	.727	.229
129.4	.724	.215
130.4	.753	.197
131.8	.744	.202
132.8	.719	.219
133.7	.812	.142
134.9	.806	.146
135.9	.820	.121
136.8	.866	.092
137.9	.880	.082
138.9	.908	.064
139.9	.953	.034
141.0	.931	.033
142.1	.968	.009
143.0	.953	.034
143.9	.965	.027
145.0	.945	.040
146.0	.973	.006
147.1	.942	.026
148.1	.934	.047
149.1	.942	.042
150.2	.945	.040
151.2	.931	.049
152.2	1.033	.000
153.1	.925	.053
154.3	.959	.015
155.1	.948	.022
156.4	1.004	.000
157.4	.985	.000
158.4	.987	.000
159.4	.953	.019
160.6	.999	.000
161.4	.987	.000
162.6	.999	.000
163.5	.993	.000
164.6	1.016	.000
165.7	.945	.024
166.7	.979	.002
167.8	1.038	.000



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER PD:

TRIAL NUMBER....02 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:23:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
168.9	.985	.014
169.7	.993	.000
170.9	1.021	.000
171.9	.959	.015
173.0	.987	.000
174.0	.987	.000
175.0	.999	.000
176.1	1.004	.000
177.1	.987	.000
178.1	.985	.000
179.1	.985	.000
180.0	1.027	.000
181.2	1.041	.000
182.3	.996	.000
183.3	.999	.000
184.2	1.010	.000
185.2	.999	.000
186.4	1.007	.000
187.4	1.018	.000
188.4	.993	.000
189.4	1.004	.000
190.5	1.038	.000
191.6	.999	.000
192.6	.993	.000
193.6	.999	.000
194.6	1.004	.000
195.7	.999	.000
196.6	1.002	.000
197.7	.990	.000
198.8	.979	.002
199.8	.982	.000
200.9	1.002	.000
202.0	1.010	.000
203.0	1.021	.000
204.1	1.002	.000
205.1	.982	.000
206.1	.982	.000
207.0	.996	.000
208.1	.999	.000
209.2	.996	.000
210.2	.982	.000

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....D2 (DP1-005)  
DATE OF TRIAL...14 SEP 1973  
FUNCTION TIME...11:23:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
211.4	1.007	.000
212.4	.994	.000
213.5	1.013	.000
214.5	1.024	.000
215.6	1.033	.000
216.5	.985	.000
217.6	1.021	.000
218.6	.982	.000
219.5	.965	.011
220.5	.982	.000
221.7	.946	.000
222.7	1.007	.000
223.7	.976	.000
224.8	.973	.000
225.8	.985	.000
226.8	.982	.000
227.9	.949	.000
229.0	1.016	.000
230.0	1.013	.000
231.0	.979	.002
232.0	1.016	.000
233.1	1.004	.000
234.0	.979	.002
235.0	.936	.030
236.1	.982	.000
237.2	.996	.000
238.3	1.024	.000
239.1	.976	.000
240.2	.990	.000

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....02 (DP1-005)

DATE OF TRIAL...14 SEP 1978

FUNCTION TIME...11123159

OBSCURANT.....DUST/DEHHS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
-----------------------------	----------------------------	----------------------------

1.0	.976	.906
2.0	1.039	.972
3.0	1.017	.959
4.0	1.002	1.052
5.0	1.025	1.128
6.0	1.023	1.055
7.0	1.000	1.023
8.0	.995	1.038
9.0	.976	.963
10.0	.980	.941
11.0	1.002	1.083
12.0	1.024	1.025
13.0	1.004	.980
14.0	.972	1.006
15.0	.976	.940
16.0	.982	.956
17.0	.977	.892
18.0	.976	1.010
19.0	.986	.958
20.0	.991	.978
21.0	1.013	.944
22.0	1.033	.991
23.0	.961	.928
24.0	.967	.917
25.0	.996	.987
26.0	1.014	1.014
27.0	.984	1.047
28.0	.995	1.025
29.0	1.029	.987
30.0	.987	.901
31.0	1.021	1.018
32.0	.872	.866
33.0	.703	.754
34.0	.475	.595
35.0	.421	.544
36.0	.219	.333
37.0	.186	.302
38.0	.197	.339
39.0	.157	.280
40.0	.169	.301
41.0	.094	.210

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....D2 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11123159  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
-----------------------------	----------------------------	----------------------------

42.0	.097	.175
43.0	.102	.177
44.0	.122	.194
45.0	.140	.274
46.0	.128	.236
47.0	.158	.254
48.0	.184	.304
49.0	.264	.397
50.0	.197	.326
51.0	.082	.189
52.0	.078	.189
53.0	.079	.182
54.0	.069	.180
55.0	.121	.217
56.0	.125	.230
57.0	.101	.217
58.0	.093	.174
59.0	.107	.207
60.0	.152	.258
61.0	.134	.250
62.0	.122	.203
63.0	.103	.198
64.0	.098	.217
65.0	.084	.191
66.0	.129	.232
67.0	.078	.175
68.0	.057	.132
69.0	.064	.156
70.0	.052	.123
71.0	.051	.123
72.0	.039	.098
73.0	.042	.099
74.0	.035	.124
75.0	.123	.215
76.0	.090	.165
77.0	.062	.147
78.0	.056	.132
79.0	.055	.134
80.0	.060	.130
81.0	.078	.165
82.0	.137	.237

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....D2 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11:23:59  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
-----------------------------	----------------------------	----------------------------

83.0	.129	.224
84.0	.172	.259
85.0	.190	.279
86.0	.150	.270
87.0	.120	.205
88.0	.127	.204
89.0	.087	.162
90.0	.105	.191
91.0	.075	.143
92.0	.085	.150
93.0	.101	.182
94.0	.112	.206
95.0	.167	.259
96.0	.137	.245
97.0	.245	.341
98.0	.156	.228
99.0	.221	.363
100.0	.234	.347
101.0	.137	.252
102.0	.120	.204
103.0	.194	.305
104.0	.146	.237
105.0	.137	.252
106.0	.163	.291
107.0	.133	.243
108.0	.134	.245
109.0	.127	.232
110.0	.153	.319
111.0	.320	.482
112.0	.327	.455
113.0	.352	.520
114.0	.419	.542
115.0	.380	.547
116.0	.360	.474
117.0	.268	.366
118.0	.346	.446
119.0	.366	.479
120.0	.411	.571
121.0	.506	.650
122.0	.458	.637
123.0	.467	.608

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER...02 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11:23:59  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM  
 FUNCTION

WAVELENGTH  
 3.443/CENTER

WAVELENGTH  
 9.750/CENTER

124.0	.477	.664
125.0	.538	.693
126.0	.519	.633
127.0	.573	.695
128.0	.671	.736
129.0	.752	.862
130.0	.748	.928
131.0	.743	.806
132.0	.789	.867
133.0	.775	.960
134.0	.744	.931
135.0	.797	.976
136.0	.858	.802
137.0	.875	.858
138.0	.868	.951
139.0	.895	.969
140.0	.872	.978
141.0	.989	.999
142.0	.972	1.046
143.0	.963	1.118
144.0	.914	1.058
145.0	.949	1.071
146.0	.967	1.056
147.0	.953	1.073
148.0	.933	1.090
149.0	.959	1.004
150.0	.973	1.052
151.0	.954	.976
152.0	.965	1.131
153.0	.970	1.009
154.0	.968	1.007
155.0	.977	1.151
156.0	.951	1.009
157.0	.951	.969
158.0	.994	.914
159.0	1.005	1.078
160.0	.974	1.017
161.0	.975	.969
162.0	1.005	.960
163.0	.971	1.001
164.0	.981	.956

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....02 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11:23:59  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
-----------------------------	----------------------------	----------------------------

165.0	1.025	.939
166.0	1.004	1.048
167.0	.982	1.085
168.0	1.019	1.007
169.0	.974	1.053
170.0	.981	1.043
171.0	1.004	1.037
172.0	.957	.927
173.0	.984	1.000
174.0	.955	.975
175.0	.978	.983
176.0	1.026	1.044
177.0	1.016	1.087
178.0	1.012	.972
179.0	.971	.989
180.0	1.017	.916
181.0	1.035	1.090
182.0	.980	1.097
183.0	.995	1.034
184.0	1.012	1.087
185.0	1.032	1.018
186.0	.969	1.041
187.0	1.043	1.094
188.0	.988	1.075
189.0	1.000	.997
190.0	.979	.995
191.0	1.005	.963
192.0	1.005	.967
193.0	.991	1.086
194.0	.968	1.031
195.0	1.001	.985
196.0	.971	1.009
197.0	1.003	1.004
198.0	1.005	.996
199.0	1.002	.969
200.0	1.021	1.073
201.0	1.012	1.006
202.0	1.020	1.033
203.0	.983	.992
204.0	.999	1.020
205.0	1.004	.947

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....02 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11:23:59  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
-----------------------------	----------------------------	----------------------------

206.0	.969	1.026
207.0	1.005	.987
208.0	.951	1.075
209.0	1.009	1.082
210.0	.989	1.095
211.0	.974	1.023
212.0	.994	1.004
213.0	.978	1.053
214.0	.978	1.009
215.0	1.027	1.037
216.0	1.009	1.140
217.0	1.055	1.233
218.0	1.012	1.084
219.0	.981	1.056
220.0	1.003	1.110
221.0	.982	1.079
222.0	1.000	.971
223.0	.997	1.021
224.0	.970	.961
225.0	.989	.872
226.0	.984	1.059
227.0	.979	1.093
228.0	1.001	1.140
229.0	.989	1.070
230.0	.971	1.048
231.0	.969	1.124
232.0	.988	1.073
233.0	1.010	1.097
234.0	.980	1.080
235.0	.995	1.105
236.0	.978	1.072
237.0	.991	1.010
238.0	1.003	1.029
239.0	.970	1.077
240.0	.991	1.033



CL VALUES (GM/M\*\*2) HACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D2 (DP1-005)

DATE OF TRIAL...14 SEP 1978

FUNCTION TIME...11:23:59

ORSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
1.0	.05876
2.0	.00000
3.0	.00000
4.0	.00000
5.0	.00000
6.0	.00000
7.0	.00000
8.0	.01167
9.0	.05866
10.0	.05048
11.0	.00000
12.0	.00000
13.0	.00000
14.0	.06820
15.0	.06016
16.0	.04341
17.0	.05700
18.0	.05857
19.0	.03362
20.0	.02206
21.0	.00000
22.0	.00000
23.0	.09750
24.0	.08167
25.0	.01030
26.0	.00000
27.0	.04023
28.0	.01257
29.0	.00000
30.0	.03315
31.0	.00000
32.0	.33533
33.0	.86092
34.0	1.81804
35.0	2.10921
36.0	3.70199
37.0	4.09976
38.0	3.95934
39.0	4.51115
40.0	4.32956
41.0	5.75870

CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....02 (DP1-005)  
DATE OF TRIAL...14 SEP 1970  
FUNCTION TIME...11123159  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
42.0	5.70261
43.0	5.57050
44.0	5.12185
45.0	4.79700
46.0	5.01685
47.0	4.50513
48.0	4.13498
49.0	3.24847
50.0	3.96238
51.0	6.09081
52.0	6.22555
53.0	6.18143
54.0	6.52522
55.0	5.14120
56.0	5.07858
57.0	5.60223
58.0	5.74898
59.0	5.45108
60.0	4.59822
61.0	4.89379
62.0	5.12225
63.0	5.53711
64.0	5.65424
65.0	6.04077
66.0	4.59917
67.0	6.23491
68.0	6.99748
69.0	6.71780
70.0	7.23436
71.0	7.24352
72.0	7.91244
73.0	7.75442
74.0	6.66859
75.0	5.11247
76.0	5.88284
77.0	6.78656
78.0	7.00977
79.0	7.05723
80.0	6.84612
81.0	6.22802
82.0	4.84990

CL VALUES (GM/M<sup>2</sup>) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D2 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:23:59  
OBSERVANT.....DUST/DERHIS

SECONDS FROM FUNCTION	CENTER
83.0	4.99485
84.0	4.28729
85.0	4.04431
86.0	4.82509
87.0	5.16992
88.0	5.02356
89.0	5.94837
90.0	5.43747
91.0	6.32978
92.0	6.01613
93.0	5.59542
94.0	5.33018
95.0	4.36218
96.0	4.84499
97.0	3.43199
98.0	4.52891
99.0	3.67685
100.0	3.54222
101.0	4.85616
102.0	5.16671
103.0	4.00259
104.0	4.69981
105.0	4.84927
106.0	4.41989
107.0	4.92726
108.0	4.90941
109.0	5.04176
110.0	4.57831
111.0	2.78182
112.0	2.72435
113.0	2.54582
114.0	2.11933
115.0	2.35963
116.0	2.49358
117.0	3.21389
118.0	2.58749
119.0	2.45415
120.0	2.16890
121.0	1.66294
122.0	1.90314
123.0	1.85733

CL VALUES (GM/M<sup>2</sup>) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D2 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:25:59  
OBSERVANT.....DUST/DERRIS

SECONDS FROM FUNCTION	CENTER
124.0	1.80360
125.0	1.51144
126.0	1.60164
127.0	1.35794
128.0	.97493
129.0	.69587
130.0	.70672
131.0	.72452
132.0	.57715
133.0	.62318
134.0	.72219
135.0	.55252
136.0	.37323
137.0	.32617
138.0	.34632
139.0	.27174
140.0	.33500
141.0	.02695
142.0	.06931
143.0	.09143
144.0	.21968
145.0	.12888
146.0	.08176
147.0	.11655
148.0	.16819
149.0	.10177
150.0	.06796
151.0	.11537
152.0	.08797
153.0	.07455
154.0	.08030
155.0	.05617
156.0	.12174
157.0	.12270
158.0	.01563
159.0	.00000
160.0	.06372
161.0	.06152
162.0	.00000
163.0	.07189
164.0	.04720

CL VALUES (GM/M\*\*2) WERE CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....02 (DPI-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:23:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
165.0	.00000
166.0	.00000
167.0	.04498
168.0	.00000
169.0	.06538
170.0	.04664
171.0	.00000
172.0	.10604
173.0	.04054
174.0	.11335
175.0	.05516
176.0	.00000
177.0	.00000
178.0	.00000
179.0	.07212
180.0	.00000
181.0	.00000
182.0	.04939
183.0	.01257
184.0	.00000
185.0	.00000
186.0	.07793
187.0	.00000
188.0	.02924
189.0	.00112
190.0	.05299
191.0	.00000
192.0	.00000
193.0	.02185
194.0	.08016
195.0	.00000
196.0	.07207
197.0	.00000
198.0	.00000
199.0	.00000
200.0	.00000
201.0	.00000
202.0	.00000
203.0	.04239
204.0	.00272
205.0	.00000

CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D2 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11123159  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
206.0	.07674
207.0	.00000
208.0	.12360
209.0	.00000
210.0	.02743
211.0	.06473
212.0	.01533
213.0	.05511
214.0	.05370
215.0	.00000
216.0	.00000
217.0	.00000
218.0	.00000
219.0	.04594
220.0	.00000
221.0	.04342
222.0	.00111
223.0	.00797
224.0	.07411
225.0	.02683
226.0	.03923
227.0	.05284
228.0	.00000
229.0	.02725
230.0	.07168
231.0	.07734
232.0	.03003
233.0	.00000
234.0	.04906
235.0	.01211
236.0	.05486
237.0	.02297
238.0	.00000
239.0	.07384
240.0	.02232

## APPENDIX F . SECTION 8

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TRIAL: D3 , DPG DUST ADD-ON

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TRIAL 03, DPG DUST ADD-ON, 14 SEP 1978, 11159159, DUST

SAMPLING POSITION	GRID REFERENCE			OBSERVED DOSAGE (GM./MIN/M**3)
	X(M)	Y(M)	Z(M)	
1	.00	.00	1.50	.00612
2	15.00	.00	1.50	.00863
3	30.00	.00	1.50	.00868
4	45.00	.00	1.50	.00948
5	60.00	.00	1.50	.03842
6	75.00	.00	1.50	.04048
7	90.00	.00	1.50	.04968
8	105.00	.00	1.50	.20502
9	120.00	.00	1.50	.25092
10	135.00	.00	1.50	.05540
11	150.00	.00	1.50	.00465
12	165.00	.00	1.50	.01227
13	180.00	.00	1.50	.02498
14	195.00	.00	1.50	.01230
15	210.00	.00	1.50	.00730

DOSAGE ALONG SIGHT LINE# 11.54000 (GM./MIN/M\*\*2)



TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 03, DPG DUST ADDON  
DATE: 10 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11:50:50

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

1.91	1.049
3.09	1.045
4.27	1.025
5.48	1.027
6.69	1.012
7.90	1.010
9.12	1.005
10.33	.963
11.56	.968
12.76	.899
13.97	.804
15.03	.173
16.38	.062
17.57	.068
18.74	.016
19.94	.018
21.13	.009
22.34	.088
23.47	.103
24.76	.064
25.94	.041
27.15	.024
28.34	.095
29.60	.051
30.83	.082
32.04	.110
33.26	.066
34.48	.015
35.61	.010
36.92	.003
38.15	.003
39.39	.015
40.64	.008
41.88	.023
43.11	.029
44.33	.071
45.45	.076
46.76	.035
48.01	.030
49.23	.024

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 05, DPG DUST ADDON  
DATE: 14 SEP 1974  
OBSERVANT: DT  
FUNCTION TIME 11:59:59

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

50.47	.003
51.71	.008
52.93	.008
54.16	.031
55.39	.035
56.60	.090
57.81	.162
59.03	.225
60.25	.170
61.45	.097
62.66	.012
63.87	.003
65.09	.001
66.32	.008
67.54	.007
68.76	.003
69.95	.009
71.06	.038
72.31	.018
73.51	.031
74.71	.047
75.92	.077
77.11	.043
78.32	.063
79.52	.035
80.70	.034
81.89	.036
83.09	.054
84.30	.065
85.51	.078
86.71	.163
87.89	.186
89.08	.153
90.29	.158
91.42	.062
92.65	.020
93.91	.042
95.06	.077
96.34	.132
97.54	.123

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL D3, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11:59:59

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

98.73	.174
99.42	.266
101.12	.235
102.34	.175
103.57	.068
104.77	.097
105.93	.086
107.22	.086
108.43	.046
109.65	.070
110.86	.094
112.07	.124
113.28	.177
114.50	.249
115.72	.395
116.94	.554
118.16	.539
119.37	.607
120.55	.593
121.73	.664
122.92	.722
124.10	.824
125.30	.858
126.49	.936
127.69	.902
128.89	.941
130.11	.954
131.33	.975
132.55	1.005
133.79	.993
134.99	.998
136.20	1.021
137.41	1.007
138.63	.992
139.80	1.000
140.98	.990
142.17	.991
143.35	1.006
144.53	.994
145.71	.996

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 03. DPG DUST ADDON  
DATE: 14 SEP 1974  
OBSCURANT: CT  
FUNCTION TIME 11:59:59

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

146.89	.998
148.08	1.006
149.26	1.009
150.40	.981
151.53	.990
152.68	.988
153.85	.966
155.03	.986
156.20	.982
157.37	.974
158.55	.964
159.74	.935
160.89	.915
162.02	.876
163.14	.861
164.28	.839
165.42	.881
166.55	.868
167.70	.813
168.86	.943
170.03	.894
171.19	.955
172.37	.930
173.54	.955
174.73	.956
175.93	.977
177.13	.955
178.31	.951
179.50	.968

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 03. DPG DUST ADDON

DATE: 14 SEP 197A

OBSCURANT: DI

FUNCTION TIME 11159159

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.91	-.363
3.09	-.363
4.27	-.362
5.48	-.362
6.69	-.361
7.90	-.361
9.12	-.360
10.33	-.357
11.56	-.358
12.76	-.353
13.97	-.344
15.03	-.191
16.38	-.092
17.57	-.065
18.74	-.013
19.94	-.021
21.13	-.017
22.34	-.108
23.47	-.132
24.76	-.093
25.94	-.067
27.15	-.040
28.34	-.115
29.60	-.067
30.83	-.105
32.04	-.143
33.26	-.094
34.48	-.024
35.61	-.018
36.92	-.005
38.15	-.006
39.39	-.028
40.64	-.014
41.88	-.037
43.11	-.049
44.33	-.100
45.45	-.106
46.76	-.057
48.01	-.051
49.23	-.040

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 11

TRIAL 03, DPG DUST ADDON  
DATE: 14 SEP 1974  
OBSERVANT: DT  
FUNCTION TIME 11:59:59

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

50.47	-.005
51.71	-.014
52.93	-.013
54.16	-.052
55.39	-.056
56.60	-.120
57.81	-.179
59.03	-.219
60.25	-.179
61.45	-.128
62.66	-.020
63.87	-.005
65.09	-.002
66.32	-.011
67.54	-.013
68.76	-.006
69.95	-.015
71.06	-.043
72.31	-.032
73.51	-.051
74.71	-.072
75.92	-.107
77.11	-.070
78.32	-.091
79.52	-.049
80.70	-.054
81.89	-.050
83.09	-.084
84.30	-.094
85.51	-.102
86.71	-.179
87.89	-.190
89.08	-.176
90.29	-.165
91.42	-.082
92.65	-.030
93.91	-.060
95.06	-.109
96.34	-.161
97.54	-.152

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 03, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSOLETE: 01  
FUNCTION TIME 11154159

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

98.73	-.176
99.92	-.212
101.12	-.224
102.34	-.180
103.57	-.099
104.77	-.121
105.93	-.112
107.22	-.115
108.43	-.068
109.65	-.102
110.86	-.109
112.07	-.153
113.24	-.184
114.50	-.225
115.72	-.273
116.94	-.239
118.16	-.309
119.37	-.309
120.55	-.280
121.73	-.329
122.92	-.303
124.10	-.345
125.30	-.344
126.49	-.348
127.69	-.345
128.89	-.346
130.11	-.356
131.33	-.347
132.55	-.354
133.74	-.359
134.99	-.355
136.20	-.360
137.41	-.359
138.63	-.354
139.80	-.360
140.98	-.359
142.17	-.359
143.35	-.360
144.53	-.360
145.71	-.359

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW C

TRIAL 03, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 11159159

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

146.89	-.357
148.08	-.360
149.26	-.360
150.40	-.359
151.53	-.359
152.68	-.359
153.85	-.358
155.03	-.359
156.20	-.358
157.37	-.355
158.55	-.352
159.74	-.353
160.89	-.353
162.02	-.351
163.18	-.349
164.28	-.344
165.42	-.347
166.55	-.348
167.70	-.348
168.86	-.354
170.03	-.352
171.19	-.357
172.37	-.352
173.54	-.356
174.73	-.353
175.93	-.357
177.13	-.357
178.31	-.356
179.50	-.356



LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 03, DRG DUST ADDON

DATE: 14 SEP 1974

OBSERVANTS: DT

FUNCTION TIME 11150259

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	.000
2.00	.000
3.00	.000
4.00	.000
5.00	.000
6.00	.000
7.00	.000
8.00	.000
9.00	.000
10.00	.000
11.00	.000
12.00	.000
13.00	.000
14.00	.000
15.00	.000
16.00	.000
17.00	.000
18.00	9.021
19.00	131.471
20.00	310.183
21.00	374.083
22.00	412.803
23.00	452.458
24.00	509.108
25.00	522.108
26.00	529.208
27.00	530.871
28.00	458.771
29.00	489.621
30.00	543.383
31.00	544.208
32.00	603.183
33.00	609.958
34.00	644.471
35.00	618.283
36.00	588.371
37.00	595.333
38.00	604.858
39.00	615.658
40.00	650.071
	652.446

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW D

TRIAL D3, DPG DUST ADDON

DATE: 14 SEP 1978

ORSCURANTS: DT

FUNCTION TIME 11:59:59

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	655.146
42.00	669.208
43.00	661.496
44.00	658.458
45.00	676.846
46.00	663.333
47.00	657.121
48.00	641.033
49.00	581.271
50.00	599.546
51.00	633.858
52.00	626.933
53.00	636.621
54.00	652.658
55.00	666.183
56.00	649.733
57.00	659.908
58.00	625.483
59.00	648.446
60.00	638.958
61.00	598.258
62.00	589.471
63.00	607.508
64.00	577.346
65.00	520.896
66.00	584.396
67.00	680.883
68.00	696.458
69.00	699.871
70.00	711.908
71.00	713.433
72.00	709.058
73.00	723.708
74.00	717.646
75.00	710.933
76.00	704.321
77.00	707.746
78.00	705.446
79.00	683.846
80.00	634.221

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

SERIAL 03, DPG DUST ADDON

DATE: 14 SEP 1974

OBSERVANT: DT

FUNCTION TIME 11159159

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

81.00	622.671
82.00	598.133
83.00	594.271
84.00	599.933
85.00	615.971
86.00	645.371
87.00	638.608
88.00	648.183
89.00	615.508
90.00	596.583
91.00	540.983
92.00	443.808
93.00	523.583
94.00	504.358
95.00	538.271
96.00	584.333
97.00	579.621
98.00	573.733
99.00	552.983
100.00	524.771
101.00	520.358
102.00	522.621
103.00	489.358
104.00	484.121
105.00	467.783
106.00	455.671
107.00	482.671
108.00	514.733
109.00	541.421
110.00	536.746
111.00	507.171
112.00	463.708
113.00	497.196
114.00	528.308
115.00	517.196
116.00	526.983
117.00	415.621
118.00	388.708
119.00	400.083
120.00	360.821

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 03, DRG DUST ADDON

DATE: 14 SEP 1974

OBSCURANT: DT

FUNCTION TIME 11159159

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	269.746
122.00	268.008
123.00	220.146
124.00	161.783
125.00	171.896
126.00	173.596
127.00	151.771
128.00	136.458
129.00	121.063
130.00	112.421
131.00	104.721
132.00	54.971
133.00	37.646
134.00	38.196
135.00	31.583
136.00	23.158
137.00	10.608
138.00	3.858
139.00	.000
140.00	.000
141.00	.000
142.00	.000
143.00	.000
144.00	.000
145.00	.000
146.00	.933
147.00	5.596
148.00	4.546
149.00	1.771
150.00	.000
151.00	.000
152.00	.000
153.00	.000
154.00	.000
155.00	.000
156.00	.000
157.00	2.121
158.00	15.496
159.00	.000
160.00	3.683

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 03, DPG DUST ADDON

DATE: 14 SEP 1974

OBSERVANT: DT

FUNCTION TIME 11:59:59

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	3.046
162.00	7.683
163.00	12.221
164.00	17.171
165.00	31.983
166.00	45.783
167.00	51.308
168.00	63.296
169.00	65.871
170.00	59.446
171.00	55.308
172.00	52.921
173.00	43.183
174.00	39.171
175.00	31.808
176.00	30.483
177.00	27.108
178.00	27.321
179.00	24.721
180.00	20.058

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....DJ (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:59:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
2.0	.996	.000
3.2	1.005	.000
4.3	1.008	.000
5.5	.999	.000
6.8	.979	.005
8.0	.996	.000
9.1	.979	.005
10.4	.958	.013
11.7	.964	.011
12.0	.904	.034
13.8	.779	.099
14.9	.226	.333
16.3	.074	.393
17.6	.074	.408
18.5	.018	.431
20.1	.024	.444
21.1	.012	.449
22.5	.137	.384
23.3	.101	.413
24.9	.086	.435
25.8	.042	.452
26.9	.021	.461
28.2	.083	.436
29.7	.054	.448
30.6	.071	.425
32.2	.146	.411
33.2	.059	.461
34.6	.018	.493
35.8	.009	.512
36.7	.006	.498
37.8	.003	.499
39.2	.012	.495
40.4	.006	.498
42.0	.027	.474
43.3	.030	.473
44.5	.065	.459
45.3	.068	.457
46.6	.030	.488
48.2	.030	.488
49.3	.021	.508
50.6	.003	.515

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....D3 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:59:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
51.4	.006	.513
52.6	.009	.497
54.2	.030	.488
55.4	.036	.486
56.7	.098	.446
57.9	.152	.425
59.0	.196	.407
60.4	.226	.395
61.5	.092	.464
62.4	.012	.511
63.5	.003	.515
64.7	.003	.499
66.2	.009	.497
67.5	.009	.497
68.5	.006	.482
69.7	.006	.482
70.9	.033	.456
72.4	.024	.459
73.6	.036	.455
74.9	.074	.440
75.9	.071	.456
77.3	.048	.466
78.3	.059	.461
79.4	.033	.487
80.5	.030	.488
81.8	.033	.472
83.2	.054	.463
84.4	.062	.444
85.6	.083	.420
86.8	.167	.388
87.7	.167	.388
89.0	.140	.398
90.2	.146	.411
91.3	.057	.462
92.5	.021	.461
94.1	.057	.447
95.3	.074	.424
96.2	.122	.405
97.7	.128	.403
98.7	.167	.388
100.0	.256	.352

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....D3 (DP1-005)

DATE OF TRIAL...14 SEP 1978

FUNCTION TIME...11:59:59

OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
101.3	.232	.362
102.2	.167	.403
103.7	.086	.435
104.8	.098	.430
105.8	.080	.437
107.2	.086	.435
108.2	.042	.468
109.8	.083	.452
111.0	.092	.432
111.9	.107	.411
113.4	.170	.371
114.7	.303	.318
115.9	.390	.268
117.1	.553	.204
118.0	.497	.226
119.3	.565	.184
120.7	.565	.184
121.9	.642	.153
122.8	.666	.128
124.2	.767	.088
125.4	.851	.055
126.5	.904	.034
127.8	.880	.044
129.0	.901	.036
130.3	.916	.030
131.4	.958	.013
132.6	.967	.010
133.8	.964	.011
135.1	.955	.014
136.2	.970	.009
137.5	.973	.007
138.8	.955	.014
139.9	.973	.007
141.1	.946	.018
142.3	.949	.017
143.3	.946	.018
144.7	.967	.010
145.8	.970	.009
146.9	.970	.009
148.1	.979	.005
149.3	.973	.007



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....D3 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:59:59  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
150.4	.961	.012
151.6	.940	.020
152.7	.952	.016
153.8	.926	.025
155.1	.955	.014
156.3	.976	.006
157.4	.934	.023
158.6	.928	.025
159.8	.886	.041
161.0	.866	.050
161.9	.836	.061
163.1	.818	.068
164.4	.797	.077
165.5	.857	.053
166.7	.842	.059
167.8	.868	.040
169.0	.907	.033
170.2	.886	.041
171.3	.928	.025
172.5	.925	.026
173.7	.910	.032
174.8	.913	.031
176.0	.934	.023
177.2	.904	.034
178.4	.913	.031

END OF PROGRAM

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....03 (DP1-005)  
 DATE OF TRIAL...14 SEP 1976  
 FUNCTION TIME...11:59:54  
 OBSERVANT.....JST/DEBRIS

SECONDS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 5.443/CENTER 9.750/CENTER

1.0	1.029	1.099
2.0	.993	1.066
3.0	1.010	1.011
4.0	1.026	1.062
5.0	.992	1.054
6.0	1.015	.972
7.0	1.000	.963
8.0	.987	1.047
9.0	.995	.901
10.0	1.022	1.015
11.0	1.022	1.048
12.0	.965	.997
13.0	.947	.962
14.0	.910	.975
15.0	.821	.886
16.0	.337	.479
17.0	.113	.189
18.0	.095	.192
19.0	.110	.230
20.0	.044	.126
21.0	.043	.126
22.0	.024	.089
23.0	.070	.150
24.0	.192	.308
25.0	.154	.265
26.0	.106	.227
27.0	.075	.157
28.0	.050	.127
29.0	.050	.115
30.0	.054	.111
31.0	.097	.189
32.0	.117	.201
33.0	.133	.262
34.0	.125	.243
35.0	.044	.124
36.0	.032	.090
37.0	.022	.067
38.0	.006	.036
39.0	.006	.031
40.0	.017	.058
41.0	.016	.063

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....05 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11:59:59  
 OBSCURANT.....DUST/DEBRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.445/CENTER 9.750/CENTER  
 FUNCTION

42.0	.015	.061
43.0	.037	.119
44.0	.047	.121
45.0	.107	.210
46.0	.092	.202
47.0	.103	.199
48.0	.053	.134
49.0	.033	.092
50.0	.042	.112
51.0	.018	.058
52.0	.013	.046
53.0	.014	.050
54.0	.018	.055
55.0	.035	.081
56.0	.003	.113
57.0	.050	.118
58.0	.129	.244
59.0	.159	.267
60.0	.231	.343
61.0	.163	.271
62.0	.206	.358
63.0	.081	.172
64.0	.013	.050
65.0	.007	.035
66.0	.005	.019
67.0	.010	.045
68.0	.015	.060
69.0	.023	.089
70.0	.007	.038
71.0	.011	.056
72.0	.036	.097
73.0	.029	.095
74.0	.030	.094
75.0	.041	.100
76.0	.073	.163
77.0	.087	.167
78.0	.067	.159
79.0	.099	.180
80.0	.057	.133
81.0	.050	.123
82.0	.046	.123

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....03 (DPI-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...11:59:54  
 OBSERVANT.....DUST/DEBRIS

SECONDS WAVELENGTH WAVELENGTH  
 FROM 3.443/CENTER 9.750/CENTER  
 FUNCTION

83.0	.043	.118
84.0	.052	.127
85.0	.059	.148
86.0	.102	.215
87.0	.132	.249
88.0	.227	.379
89.0	.198	.318
90.0	.191	.282
91.0	.186	.300
92.0	.133	.222
93.0	.047	.103
94.0	.047	.107
95.0	.065	.120
96.0	.121	.205
97.0	.126	.238
98.0	.142	.239
99.0	.191	.286
100.0	.199	.325
101.0	.280	.427
102.0	.317	.470
103.0	.259	.402
104.0	.116	.213
105.0	.120	.207
106.0	.119	.206
107.0	.106	.190
108.0	.106	.212
109.0	.108	.198
110.0	.055	.135
111.0	.092	.188
112.0	.104	.198
113.0	.17	.305
114.0	.21	.340
115.0	.20	.327
116.0	.318	.439
117.0	.397	.560
118.0	.536	.736
119.0	.596	.694
120.0	.612	.697
121.0	.596	.684
122.0	.582	.716
123.0	.645	.747

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....03 (DP1-005)  
 DATE OF TRIAL...14 SEP 1974  
 FUNCTION TIME...11354859  
 OBSERVANT.....JUST/DEBRS

SECTIONS  
 FROM  
 FUNCTION

WAVELENGTH WAVELENGTH  
 3.443/CENTER 2.750/CENTER

124.0	.720	.811
125.0	.716	.832
126.0	.757	.858
127.0	.835	.931
128.0	.904	.904
129.0	.890	.953
130.0	.894	.944
131.0	.880	.945
132.0	.955	1.054
133.0	.953	.931
134.0	.971	.976
135.0	.946	1.027
136.0	.970	1.034
137.0	.989	1.065
138.0	.983	1.118
139.0	.987	1.059
140.0	.987	1.016
141.0	.989	1.060
142.0	.961	1.033
143.0	.930	.965
144.0	.946	.958
145.0	.960	1.037
146.0	.965	.991
147.0	.970	1.045
148.0	.981	1.015
149.0	.981	.995
150.0	.994	1.047
151.0	.991	1.056
152.0	.956	1.024
153.0	.964	.946
154.0	.937	.943
155.0	.941	1.001
156.0	.944	1.016
157.0	.942	.967
158.0	.977	1.033
159.0	.953	1.000
160.0	.923	1.012
161.0	.888	.945
162.0	.873	.945
163.0	.865	.979
164.0	.857	.915

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....35 (OPT-005)  
 DATE OF TRIAL...19 SEP 1979  
 FUNCTION TIME...11:50:59  
 OBSERVER.....JST/DEHIS

SEC INDS      WAVELENGTH      WAVELENGTH  
 6230      5.445/CENTER      4.750/CENTER  
 FUNCTION

165.0	.410	.926
166.0	.443	.932
167.0	.463	.974
168.0	.449	.959
169.0	.464	.942
170.0	.414	.971
171.0	.304	.936
172.0	.414	.942
173.0	.414	1.003
174.0	.421	.972
175.0	.404	.956
176.0	.415	.901
177.0	.424	.984
178.0	.439	1.070
179.0	.416	.989
180.0	.414	.936

GL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....03 (DPI-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...11:59:59  
OBSERVANT.....JUST/DEB/IS

SECONDS FROM FUNCTION	CENTER
1.0	.00000
2.0	.01579
3.0	.00000
4.0	.00000
5.0	.01893
6.0	.00000
7.0	.00119
8.0	.03100
9.0	.01075
10.0	.00000
11.0	.00000
12.0	.08969
13.0	.13218
14.0	.22572
15.0	.47313
16.0	2.51402
17.0	5.25139
18.0	5.65304
19.0	5.30785
20.0	7.49964
21.0	7.55053
22.0	6.47967
23.0	6.39645
24.0	3.96860
25.0	4.49757
26.0	5.39811
27.0	6.24395
28.0	7.19453
29.0	7.18688
30.0	7.02584
31.0	5.60102
32.0	5.16628
33.0	4.75345
34.0	5.00073
35.0	7.26274
36.0	8.30467
37.0	9.20060
38.0	12.15067
39.0	12.47292
40.0	9.78077
41.0	9.94546

CL VALUES (RM/4\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....03 (DP1-005)  
DATE OF TRIAL...14 SEP 1974  
FUNCTION TIME...11:59:59  
OBSERVANT.....JUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
42.0	10.01869
43.0	7.95905
44.0	7.33628
45.0	5.37251
46.0	5.72980
47.0	5.47791
48.0	7.07541
49.0	8.21005
50.0	7.53774
51.0	9.61301
52.0	10.52040
53.0	10.23763
54.0	9.69043
55.0	9.01656
56.0	7.54571
57.0	7.20539
58.0	4.92459
59.0	4.41609
60.0	3.51903
61.0	4.36920
62.0	3.79677
63.0	6.03730
64.0	10.46277
65.0	11.79213
66.0	12.72108
67.0	11.08697
68.0	10.03290
69.0	9.10379
70.0	12.04478
71.0	10.77856
72.0	7.96583
73.0	8.48266
74.0	8.41005
75.0	7.69769
76.0	6.29279
77.0	5.97953
78.0	6.48434
79.0	5.57024
80.0	6.87011
81.0	7.22596
82.0	7.38613



CL VALUES (GMA-142) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....03 (DP1-005)  
DATE OF TRIAL...14 SEP 1976  
FUNCTION TIME...11:59:59  
DISCUANT.....JUST/DEHRIS

SECONDS FROM FUNCTION	CENTER
83.0	7.54774
84.0	7.11467
85.0	6.51521
86.0	5.49868
87.0	4.67774
88.0	3.56746
89.0	3.49594
90.0	3.97858
91.0	4.04913
92.0	4.44090
93.0	7.32979
94.0	7.34070
95.0	6.58914
96.0	5.06509
97.0	4.97485
98.0	4.64352
99.0	3.98143
100.0	3.88536
101.0	3.06072
102.0	2.75934
103.0	3.25333
104.0	5.18267
105.0	5.10418
106.0	5.11854
107.0	5.34998
108.0	5.04975
109.0	5.34836
110.0	6.98527
111.0	5.75044
112.0	5.45238
113.0	4.17350
114.0	3.72768
115.0	3.76351
116.0	2.75717
117.0	2.22137
118.0	1.50015
119.0	1.24410
120.0	1.18114
121.0	1.24415
122.0	1.29997
123.0	1.05597

GL VALUES (GV/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER.....03 (DP1-005)  
DATE OF TRIAL...14 SEP 1974  
EXTINCTION TIME...11:59:54  
UNSCORANT.....JUST DEARIS

SECONDS FROM EXTINCTION	CENTER
124.0	.79083
125.0	.30405
126.0	.00815
127.0	.43407
128.0	.24250
129.0	.26880
130.0	.20352
131.0	.24219
132.0	.10402
133.0	.11677
134.0	.06478
135.0	.12834
136.0	.07436
137.0	.02665
138.0	.04200
139.0	.03071
140.0	.08085
141.0	.07271
142.0	.09470
143.0	.17345
144.0	.13313
145.0	.09918
146.0	.08540
147.0	.07371
148.0	.04633
149.0	.04580
150.0	.01492
151.0	.02120
152.0	.10930
153.0	.08772
154.0	.15641
155.0	.14628
156.0	.12815
157.0	.14202
158.0	.05567
159.0	.11548
160.0	.19233
161.0	.28559
162.0	.32633
163.0	.34954
164.0	.37062

CL VALUES (0474442) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TOTAL NUMBER.....03 (021-005)  
DATE OF TOTAL...14 SEP 1974  
EXECUTION TIME...11:59:54  
OBSERVANT.....JUST/DERRIS

SECONDS F2J4 FUNCTION	CENTER
165.0	.30584
166.0	.40484
167.0	.35505
168.0	.39323
169.0	.35075
170.0	.21515
171.0	.24225
172.0	.20361
173.0	.20264
174.0	.19883
175.0	.24155
176.0	.21155
177.0	.19072
178.0	.15130
179.0	.21194
180.0	.21558

APPENDIX F. SECTION 9

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TRIAL: D4 , DPG DUST ADD-ON

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F-9-7	TABLE: CONTRAST RATIO FOR WAVELENGTH BETWEEN 0.4 AND 0.7 $\mu\text{m}$ MEASURED ALONG CENTER ROW
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TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 04, DPG DUST ADDON

DATE: 14 SEP 1974

OBSERVANT: DT

FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

1.09	1.006
2.19	1.007
3.29	.975
4.40	1.005
5.51	1.000
6.62	1.001
7.73	1.014
8.84	.986
9.94	.985
11.04	.971
12.13	.939
13.23	.943
14.33	.788
15.43	.833
16.54	.653
17.65	.564
18.76	.886
19.72	.237
20.90	.055
22.04	.022
23.20	.068
24.21	.081
25.42	.100
26.52	.082
27.55	.063
28.60	.044
29.64	.130
30.95	.097
32.05	.086
33.16	.051
34.22	.020
35.32	.092
36.48	.020
37.59	.011
38.70	.020
39.82	.023
40.95	.044
41.98	.112
43.19	.105
44.31	.088

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL D4, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 12120157

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

45.43	.027
46.55	.024
47.66	.014
48.76	.027
49.87	.006
50.97	.023
52.07	.044
53.12	.022
54.14	.027
55.43	.032
56.53	.025
57.59	.070
58.71	.041
59.79	.030
60.96	.066
62.07	.057
63.17	.052
64.22	.006
65.38	.009
66.48	.020
67.52	.043
68.65	.045
69.78	.093
70.84	.090
71.95	.129
73.01	.095
74.19	.158
75.31	.255
76.41	.195
77.52	.253
78.44	.080
79.73	.010
80.85	.063
81.97	.053
83.04	.049
84.20	.039
85.32	.042
86.42	.074
87.47	.244
88.59	.313

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 04, DPG DUST ADDON

DATE: 14 SEP 1974

OBSERVANT: DT

FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

89.84	.394
90.89	.200
91.84	.256
92.85	.053
94.11	.020
95.23	.049
96.27	.030
97.44	.044
98.54	.062
99.61	.124
100.76	.171
101.74	.076
102.96	.087
103.92	.108
105.10	.030
106.14	.007
107.23	.061
108.49	.023
109.61	.032
110.74	.043
111.45	.166
112.95	.153
114.06	.149
115.21	.260
116.33	.176
117.45	.299
118.57	.072
119.60	.083
120.74	.034
121.92	.022
123.00	.035
124.14	.022
125.26	.011
126.39	.003
127.51	.004
128.62	.014
129.66	.014
130.75	.017
131.86	.053
132.97	.102

TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW 0

TRIAL 04. DPG DUST ADDON

DATE: 14 SEP 1974

OBSERVANT: DT

FUNC TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

134.08	.163
135.20	.093
136.33	.134
137.44	.250
138.52	.305
139.68	.249
140.80	.224
141.91	.337
143.02	.381
144.11	.543
145.21	.633
146.32	.607
147.42	.644
148.52	.753
149.62	.803
150.73	.789
151.81	.816
152.91	.828
154.01	.844
155.13	.838
156.23	.839
157.34	.842
158.45	.896
159.57	.889
160.70	.895
161.82	.898
162.94	.923
164.05	.913
165.17	.894
166.30	.901
167.42	.904
168.54	.920
169.65	.915
170.77	.902
171.90	.921
173.02	.839
174.15	.887
175.28	.876
176.41	.860
177.54	.861



TRANSMITTANCE FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW U

TRIAL 04, DPG DUST ADDON  
DATE: 14 SEP 1974  
OBSERVANT: DT  
FUNCTION TIME 12120157

TIME AFTER FUNCTION  
(SECONDS)

TRANSMITTANCE  
(0.4-0.7)

178.04  
179.02  
180.95  
182.07

.857  
.906  
.907  
.898

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG 40W 0

TRIAL 04, (05 DIST ADDON)  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

1.09	-.432
2.19	-.432
3.29	-.429
4.40	-.432
5.51	-.431
6.62	-.431
7.73	-.432
8.84	-.430
9.94	-.430
11.04	-.428
12.13	-.425
13.23	-.414
14.33	-.407
15.43	-.410
16.54	-.384
17.65	-.363
18.76	-.349
19.72	-.229
20.90	-.074
22.09	-.036
23.20	-.087
24.21	-.114
25.42	-.141
26.52	-.112
27.55	-.088
28.60	-.072
29.84	-.154
30.95	-.130
32.05	-.127
33.16	-.082
34.22	-.036
35.32	-.135
36.48	-.035
37.59	-.017
38.70	-.032
39.82	-.039
40.95	-.075
41.98	-.137
43.14	-.146
44.31	-.126

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL D4, DPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

45.43	-.042
46.55	-.045
47.66	-.024
48.76	-.045
49.87	-.010
50.97	-.040
52.07	-.081
53.12	-.039
54.18	-.048
55.43	-.051
56.53	-.036
57.59	-.103
58.71	-.116
59.79	-.040
60.96	-.079
62.07	-.092
63.17	-.086
64.22	-.012
65.38	-.018
66.48	-.035
67.52	-.070
68.65	-.073
69.78	-.130
70.84	-.108
71.95	-.149
73.01	-.139
74.19	-.148
75.31	-.250
76.41	-.224
77.52	-.231
78.48	-.106
79.73	-.017
80.85	-.094
81.97	-.046
83.08	-.132
84.20	-.065
85.32	-.120
86.42	-.112
87.47	-.248
88.59	-.269

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 04, DPG DUST ADDON

DATE: 14 SEP 1978

DISCUSSANT: DT

FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

89.06	-.316
90.69	-.183
91.88	-.191
92.85	-.102
94.11	-.035
95.23	-.079
96.27	-.048
97.44	-.077
98.54	-.084
99.61	-.164
100.76	-.200
101.78	-.096
102.96	-.109
103.92	-.102
105.10	-.053
106.14	-.013
107.23	-.093
108.49	-.041
109.61	-.045
110.74	-.096
111.85	-.180
112.95	-.153
114.08	-.204
115.21	-.262
116.33	-.198
117.45	-.279
118.57	-.111
119.60	-.117
120.78	-.054
121.92	-.024
123.00	-.044
124.14	-.039
125.26	-.021
126.39	-.006
127.51	-.008
128.62	-.024
129.66	-.025
130.75	-.028
131.86	-.078
132.97	-.144

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG ROW D

TRIAL 04, DPG DUST ADDON

DATE: 14 SEP 1978

OBSCURANT: DT

FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

134.08	-.202
135.20	-.135
136.33	-.162
137.44	-.255
138.52	-.200
139.68	-.242
140.80	-.200
141.91	-.269
143.02	-.317
144.11	-.361
145.21	-.371
146.32	-.343
147.42	-.352
148.52	-.387
149.62	-.408
150.73	-.402
151.81	-.382
152.91	-.362
154.01	-.414
155.13	-.413
156.23	-.413
157.34	-.412
158.45	-.417
159.57	-.413
160.70	-.413
161.82	-.413
162.94	-.420
164.05	-.422
165.17	-.418
166.30	-.421
167.42	-.418
168.54	-.422
169.65	-.422
170.77	-.418
171.90	-.423
173.02	-.413
174.15	-.417
175.28	-.412
176.41	-.411
177.54	-.410

CONTRAST RATIO FOR WAVE LENGTH BETWEEN 0.4 AND 0.7 MICROMETERS  
MEASURED ALONG HOP 0

TRIAL 04, OPG MUST ADDON  
DATE: 14 SEP 1974  
OBSERVANT: OT  
FUNCTION TIME 12:20:47

TIME AFTER FUNCTION  
(SECONDS)

CONTRAST RATIO  
(0.4-0.7)

178.64  
179.62  
180.95  
182.07

-.417  
-.420  
-.421  
-.366

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG WAVE 0

TRIAL 04, DPG DIST ADON

DATE: 14 SEP 1974

OBSERVATIONS: 01

FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

1.00	.000
2.00	.000
3.00	.000
4.00	.000
5.00	.000
6.00	.000
7.00	.000
8.00	.000
9.00	.000
10.00	.000
11.00	.000
12.00	.000
13.00	.000
14.00	.000
15.00	.000
16.00	7.411
17.00	10.511
18.00	18.049
19.00	18.361
20.00	46.036
21.00	78.624
22.00	138.486
23.00	281.399
24.00	431.199
25.00	483.861
26.00	476.549
27.00	505.436
28.00	539.911
29.00	548.423
30.00	523.448
31.00	537.686
32.00	549.011
33.00	573.986
34.00	551.136
35.00	567.711
36.00	564.648
37.00	574.448
38.00	607.773
39.00	631.061
40.00	621.136

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 1

TOTAL D4, DPG DUST ADDED

DATE: 14 SEP 1978

UNSCURANT: DT

FUNCTION TIME 12120.57

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

41.00	633.236
42.00	655.011
43.00	671.823
44.00	650.286
45.00	629.911
46.00	581.948
47.00	603.736
48.00	626.269
49.00	637.661
50.00	645.186
51.00	650.886
52.00	641.661
53.00	632.873
54.00	656.523
55.00	657.523
56.00	629.161
57.00	627.298
58.00	703.273
59.00	690.261
60.00	643.448
61.00	651.948
62.00	636.298
63.00	649.298
64.00	650.823
65.00	651.611
66.00	648.286
67.00	658.311
68.00	668.873
69.00	658.936
70.00	669.536
71.00	630.886
72.00	608.498
73.00	624.599
74.00	624.498
75.00	578.298
76.00	610.811
77.00	605.561
78.00	555.349
79.00	512.073
80.00	496.396



LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROAD

TRIAL 04, PPG DUST ADDON  
DATE: 14 SEP 1978  
OBSERVANT: DT  
FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

81.00	485.061
82.00	604.498
83.00	436.536
84.00	429.411
85.00	613.711
86.00	597.936
87.00	621.111
88.00	607.111
89.00	576.198
90.00	583.386
91.00	517.186
92.00	429.873
93.00	392.361
94.00	425.724
95.00	479.361
96.00	501.023
97.00	551.611
98.00	562.166
99.00	607.048
100.00	600.986
101.00	591.398
102.00	631.248
103.00	603.036
104.00	521.573
105.00	573.349
106.00	560.011
107.00	605.849
108.00	637.711
109.00	634.923
110.00	585.461
111.00	644.311
112.00	660.748
113.00	613.123
114.00	538.073
115.00	510.886
116.00	458.536
117.00	421.861
118.00	411.246
119.00	413.236
120.00	428.161

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 04, DPG DUST ADDON  
DATE: 14 SEP 1979  
UNSCURANT: DT  
FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

121.00	413.626
122.00	406.648
123.00	544.036
124.00	587.448
125.00	600.061
126.00	601.849
127.00	607.111
128.00	621.236
129.00	628.761
130.00	633.736
131.00	646.561
132.00	668.948
133.00	648.686
134.00	661.349
135.00	661.474
136.00	652.736
137.00	608.799
138.00	596.474
139.00	562.273
140.00	541.736
141.00	487.936
142.00	457.261
143.00	468.299
144.00	492.211
145.00	472.123
146.00	419.586
147.00	313.773
148.00	236.486
149.00	206.474
150.00	208.224
151.00	215.936
152.00	177.624
153.00	113.348
154.00	107.911
155.00	89.094
156.00	92.736
157.00	89.399
158.00	83.949
159.00	90.828
160.00	77.949

LUMINANCE FOR WAVE LENGTH 0.4-0.7 MICROMETERS MEASURED ALONG ROW 0

TRIAL 04, DRG DUST ACTION

DATE: 14 SEP 1978

OBSCURANT: DT

FUNCTION TIME 12:20:57

TIME AFTER FUNCTION  
(SECONDS)

LUMINANCE  
(FOOTLAMBERTS)

161.00	66.311
162.00	54.246
163.00	52.699
164.00	58.607
165.00	47.111
166.00	32.761
167.00	31.436
168.00	38.874
169.00	37.199
170.00	36.246
171.00	31.586
172.00	31.486
173.00	28.524
174.00	34.049
175.00	49.074
176.00	73.686
177.00	61.149
178.00	74.274
179.00	77.274
180.00	74.811
181.00	74.986
182.00	66.986

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....04 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
1.2	.995	.002
2.3	.995	.002
3.4	.989	.004
4.5	.995	.000
5.6	1.014	.000
6.7	1.008	.000
7.9	1.030	.000
8.9	.986	.006
10.1	.986	.000
11.2	.976	.000
12.2	.951	.003
13.3	.910	.019
14.3	.857	.040
15.4	.873	.034
16.7	.766	.076
17.7	.656	.119
18.7	.556	.174
19.6	.270	.301
20.8	.057	.400
22.2	.031	.410
23.3	.066	.396
24.1	.075	.393
25.5	.104	.381
26.5	.075	.393
27.5	.057	.400
28.9	.044	.405
30.0	.126	.389
31.0	.097	.415
32.0	.078	.423
33.2	.047	.435
34.1	.016	.487
35.2	.085	.420
36.6	.025	.443
37.4	.009	.450
38.6	.022	.429
39.6	.022	.429
41.0	.053	.417
41.9	.094	.461
43.2	.094	.401
44.3	.085	.420
45.5	.025	.443

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....04 (DM1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SP/NM
46.7	.050	.434
47.8	.025	.443
48.7	.025	.443
49.9	.006	.451
50.9	.022	.424
52.0	.044	.420
53.0	.022	.424
54.1	.024	.427
55.5	.034	.423
56.7	.025	.424
57.5	.060	.414
58.6	.075	.408
59.7	.028	.427
61.0	.042	.406
62.1	.057	.413
63.2	.053	.417
64.1	.009	.434
65.1	.009	.434
66.6	.022	.429
67.4	.044	.420
68.6	.041	.422
69.8	.104	.397
70.7	.078	.391
71.9	.119	.375
72.4	.048	.348
74.3	.176	.353
75.3	.248	.325
76.5	.226	.334
77.5	.226	.349
78.4	.078	.423
79.8	.016	.431
80.9	.063	.413
82.0	.057	.400
83.0	.045	.349
84.2	.041	.406
85.4	.042	.390
86.5	.041	.346
87.4	.220	.336
88.7	.326	.294
89.8	.374	.276
90.6	.198	.360

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....04 (DPI-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/MM
91.7	.239	.344
92.8	.088	.403
94.1	.022	.429
95.3	.069	.411
96.2	.031	.410
97.4	.047	.404
98.7	.066	.396
99.8	.129	.372
100.6	.163	.358
101.6	.072	.394
103.1	.129	.372
103.8	.110	.379
105.0	.031	.410
106.4	.013	.417
107.1	.057	.400
108.4	.022	.413
109.7	.041	.408
110.8	.075	.393
112.0	.235	.330
112.9	.146	.364
114.2	.198	.345
115.1	.261	.320
116.4	.170	.356
117.3	.283	.312
118.6	.069	.411
119.6	.075	.408
120.7	.031	.441
122.0	.025	.428
122.9	.031	.425
124.1	.014	.430
125.4	.016	.431
126.1	.003	.436
127.6	.006	.435
128.5	.013	.433
129.7	.013	.433
130.7	.016	.416
132.0	.063	.397
133.1	.110	.379
134.1	.151	.363
135.3	.129	.372
136.4	.144	.366

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....04 (DP1-005)  
DATE OF TRIAL...14 SEP 1974  
FUNCTION TIME...12:20:57  
OBSERVANT.....DUST/DEHRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM <sup>2</sup> /SR/NN
137.0	.245	.326
138.4	.289	.309
139.8	.232	.347
140.6	.204	.342
142.0	.348	.286
143.0	.361	.265
144.2	.565	.186
145.3	.609	.168
146.3	.581	.179
147.5	.628	.145
148.6	.766	.091
149.7	.791	.082
150.8	.772	.105
151.9	.804	.092
153.0	.832	.066
154.0	.841	.062
155.2	.816	.072
156.4	.841	.062
157.5	.829	.083
158.5	.892	.042
159.6	.879	.047
160.8	.888	.059
162.0	.892	.042
163.0	.904	.037
164.1	.898	.040
165.2	.879	.047
166.4	.898	.040
167.5	.888	.044
168.6	.895	.057
169.8	.914	.034
170.9	.901	.039
171.9	.904	.037
173.0	.819	.071
174.0	.857	.056
175.3	.870	.051
176.5	.854	.057
177.7	.857	.056
178.8	.876	.048
179.9	.898	.040
181.0	.892	.042
182.1	.892	.042

TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....04 (DPI-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SR/NM
183.3	.879	.047
184.4	.873	.050
185.5	.868	.059
186.6	.879	.047
187.6	.866	.052
188.8	.860	.070
190.0	.829	.067
191.2	.829	.067
192.2	.826	.084
193.4	.832	.036
194.5	.808	.060
195.6	.851	.058
196.7	.854	.073
197.8	.835	.080
199.0	.860	.070
200.1	.838	.079
201.2	.835	.080
202.3	.835	.080
203.5	.854	.073
204.6	.860	.070
205.6	.870	.051
206.8	.873	.050
207.9	.863	.053
209.0	.882	.062
210.1	.888	.044
211.3	.882	.046
212.4	.895	.057
213.5	.892	.058
214.7	.885	.060
215.7	.895	.057
216.8	.904	.037
218.0	.901	.039
219.0	.904	.037
220.2	.917	.048
221.3	.914	.049
222.5	.898	.056
223.5	.895	.057
224.6	.914	.049
225.7	.914	.034
226.9	.923	.030
228.0	.917	.048



TRANSMITTANCE, AND CLOUD LUMINANCE FOR  
WAVELENGTH 1.060 MICROMETER LOCATED ON CENTER ROW

TRIAL NUMBER....D4 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	TRANSMITTANCE (1.060)	CLOUD LUMINANCE MICROWATTS/CM**2/SP/NM
229.2	.923	.046
230.3	.923	.046
231.4	.910	.051
232.4	.917	.048
233.5	.885	.045
234.7	.888	.044
235.9	.860	.070
236.9	.876	.048
238.1	.870	.051
239.0	.860	.070
240.3	.854	.073
241.3	.848	.060
242.5	.835	.064
243.6	.791	.097
244.7	.794	.096
245.8	.832	.081
246.9	.851	.074
248.0	.854	.073
249.1	.851	.074
250.3	.876	.064
251.4	.879	.063
252.5	.870	.067
253.6	.885	.060
254.7	.888	.059
255.8	.898	.056
256.9	.888	.059
258.0	.692	.058
259.0	.885	.060
260.1	.857	.071
261.2	.848	.075

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....04 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...12:20:57  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION      WAVELENGTH 3.443/CENTER      WAVELENGTH 9.750/CENTER

1.0	1.017	1.020
2.0	1.011	.991
3.0	1.009	1.035
4.0	1.018	.972
5.0	.992	.957
6.0	1.013	1.091
7.0	.989	1.032
8.0	1.016	.973
9.0	1.000	.944
10.0	1.009	.940
11.0	.998	.947
12.0	1.019	1.019
13.0	.978	1.007
14.0	.994	1.037
15.0	.948	.944
16.0	.962	.966
17.0	.909	.936
18.0	.843	.867
19.0	.760	.814
20.0	.562	.633
21.0	.202	.305
22.0	.091	.140
23.0	.051	.106
24.0	.109	.219
25.0	.126	.236
26.0	.094	.191
27.0	.148	.280
28.0	.123	.258
29.0	.077	.186
30.0	.087	.146
31.0	.205	.363
32.0	.130	.236
33.0	.098	.190
34.0	.075	.157
35.0	.039	.106
36.0	.063	.132
37.0	.041	.099
38.0	.042	.114
39.0	.019	.066
40.0	.035	.104
41.0	.038	.110

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....04 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...12:20:57  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
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42.0	.073	.162
43.0	.140	.268
44.0	.130	.253
45.0	.095	.193
46.0	.062	.138
47.0	.035	.087
48.0	.059	.140
49.0	.038	.103
50.0	.030	.086
51.0	.016	.050
52.0	.026	.078
53.0	.063	.157
54.0	.026	.071
55.0	.034	.101
56.0	.039	.106
57.0	.048	.119
58.0	.035	.102
59.0	.061	.152
60.0	.054	.126
61.0	.032	.089
62.0	.076	.160
63.0	.071	.152
64.0	.070	.156
65.0	.014	.059
66.0	.018	.057
67.0	.023	.064
68.0	.055	.122
69.0	.062	.139
70.0	.070	.153
71.0	.109	.217
72.0	.103	.197
73.0	.137	.238
74.0	.105	.196
75.0	.155	.269
76.0	.274	.442
77.0	.252	.419
78.0	.304	.438
79.0	.171	.287
80.0	.039	.093
81.0	.024	.066
82.0	.056	.119

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....04 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...12:20:57  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
83.0	.068	.146
84.0	.093	.185
85.0	.061	.148
86.0	.110	.200
87.0	.125	.224
88.0	.220	.345
89.0	.339	.465
90.0	.389	.529
91.0	.377	.503
92.0	.158	.249
93.0	.263	.395
94.0	.103	.187
95.0	.034	.084
96.0	.044	.099
97.0	.066	.139
98.0	.044	.102
99.0	.056	.142
100.0	.124	.210
101.0	.169	.278
102.0	.147	.260
103.0	.119	.224
104.0	.126	.222
105.0	.084	.159
106.0	.032	.086
107.0	.016	.053
108.0	.095	.207
109.0	.020	.054
110.0	.024	.065
111.0	.096	.210
112.0	.119	.225
113.0	.223	.345
114.0	.183	.293
115.0	.215	.337
116.0	.324	.449
117.0	.228	.325
118.0	.227	.327
119.0	.224	.356
120.0	.084	.178
121.0	.065	.153
122.0	.048	.114
123.0	.038	.097

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER...04 (DP1-005)  
 DATE OF TRIAL...14 SEP 1978  
 FUNCTION TIME...12:20:57  
 OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
124.0	.036	.093
125.0	.030	.081
126.0	.019	.060
127.0	.017	.056
128.0	.010	.032
129.0	.008	.030
130.0	.015	.054
131.0	.016	.058
132.0	.023	.079
133.0	.064	.154
134.0	.136	.279
135.0	.175	.308
136.0	.199	.239
137.0	.188	.332
138.0	.233	.380
139.0	.310	.436
140.0	.291	.404
141.0	.238	.358
142.0	.241	.376
143.0	.354	.467
144.0	.379	.493
145.0	.541	.639
146.0	.605	.732
147.0	.604	.712
148.0	.657	.738
149.0	.703	.788
150.0	.787	.853
151.0	.809	.844
152.0	.759	.813
153.0	.802	.802
154.0	.822	.851
155.0	.831	.850
156.0	.815	.832
157.0	.834	.853
158.0	.839	.892
159.0	.875	.881
160.0	.886	.940
161.0	.882	.966
162.0	.894	1.005
163.0	.909	.967
164.0	.913	.979

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER...04 (DP1-005)

DATE OF TRIAL...14 SEP 1978

FUNCTION TIME...12120157

OBSCURANT.....DUST/DEHHS

SECONDS FROM FUNCTION WAVELENGTH 3.443/CENTER WAVELENGTH 9.750/CENTER

165.0	.896	.976
166.0	.879	.914
167.0	.923	1.000
168.0	.902	.956
169.0	.895	.934
170.0	.909	.961
171.0	.914	.926
172.0	.910	.966
173.0	.885	.976
174.0	.845	.941
175.0	.863	.952
176.0	.860	.944
177.0	.852	.915
178.0	.857	.894
179.0	.883	.955
180.0	.890	.916
181.0	.890	.971
182.0	.894	.942
183.0	.878	.986
184.0	.892	1.018
185.0	.888	.999
186.0	.881	.973
187.0	.877	.978
188.0	.882	.969
189.0	.852	.961
190.0	.845	.948
191.0	.830	.969
192.0	.831	.947
193.0	.858	.955
194.0	.849	.965
195.0	.840	.960
196.0	.852	.980
197.0	.852	.967
198.0	.851	.935
199.0	.846	1.008
200.0	.858	1.008
201.0	.845	1.014
202.0	.835	.981
203.0	.848	.988
204.0	.840	.949
205.0	.869	1.016

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....04 (DP1-005)

DATE OF TRIAL...14 SEP 1978

FUNCTION TIME...12:20:57

OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
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206.0	.860	.995
207.0	.878	1.004
208.0	.877	1.033
209.0	.875	1.022
210.0	.889	1.015
211.0	.880	1.040
212.0	.870	1.010
213.0	.898	.981
214.0	.882	.935
215.0	.887	.972
216.0	.915	1.044
217.0	.900	1.049
218.0	.898	1.000
219.0	.886	.985
220.0	.898	1.011
221.0	.913	1.038
222.0	.931	1.064
223.0	.900	1.036
224.0	.907	1.027
225.0	.893	1.047
226.0	.897	.999
227.0	.910	1.027
228.0	.922	1.033
229.0	.923	1.061
230.0	.927	1.059
231.0	.936	.981
232.0	.925	1.048
233.0	.922	1.055
234.0	.916	1.048
235.0	.898	.987
236.0	.885	1.034
237.0	.871	.998
238.0	.901	1.044
239.0	.876	1.064
240.0	.893	.998
241.0	.860	.989
242.0	.863	.992
243.0	.832	1.020
244.0	.826	.936
245.0	.813	1.001
246.0	.818	.955

# TRANSMITTANCE FOR INDICATED WAVELENGTH AND LOCATION

TRIAL NUMBER....04 (DP1-005)

DATE OF TRIAL...14 SEP 1970

FUNCTION TIME...12120157

OBSERVANT.....DUST/DEHNIS

SECONDS FROM FUNCTION	WAVELENGTH 3.443/CENTER	WAVELENGTH 9.750/CENTER
-----------------------------	----------------------------	----------------------------

247.0	.850	.992
248.0	.851	1.020
249.0	.861	.998
250.0	.856	1.012
251.0	.869	1.015
252.0	.891	1.021
253.0	.881	1.055
254.0	.899	1.071
255.0	.909	1.085
256.0	.918	1.075
257.0	.907	1.062
258.0	.893	1.102
259.0	.887	1.079
260.0	.870	1.007
261.0	.866	1.027
262.0	.856	.997



CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....04 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSERVANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
1.0	.00000
2.0	.00000
3.0	.00000
4.0	.00000
5.0	.02032
6.0	.00000
7.0	.02667
8.0	.00000
9.0	.00000
10.0	.00000
11.0	.00586
12.0	.00000
13.0	.00565
14.0	.01504
15.0	.12698
16.0	.09557
17.0	.23183
18.0	.41687
19.0	.66803
20.0	1.40401
21.0	3.90129
22.0	5.85042
23.0	7.27509
24.0	5.39665
25.0	5.04564
26.0	5.76445
27.0	4.66805
28.0	5.11021
29.0	6.24426
30.0	5.94584
31.0	3.87078
32.0	4.97680
33.0	5.67228
34.0	6.33078
35.0	7.94379
36.0	6.74763
37.0	7.78221
38.0	7.72182
39.0	9.68503
40.0	8.17387
41.0	7.99382

CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....04 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
42.0	6.38370
43.0	4.79833
44.0	4.98104
45.0	5.74016
46.0	6.79746
47.0	8.15949
48.0	6.90213
49.0	7.99794
50.0	8.52290
51.0	10.13313
52.0	8.87554
53.0	6.74024
54.0	8.93527
55.0	8.24624
56.0	7.88634
57.0	7.39537
58.0	8.14503
59.0	6.81721
60.0	7.11417
61.0	8.40346
62.0	6.29410
63.0	6.44715
64.0	6.49767
65.0	10.34403
66.0	9.76679
67.0	9.23290
68.0	7.07553
69.0	6.76956
70.0	6.47713
71.0	5.39526
72.0	5.54601
73.0	4.84611
74.0	5.50497
75.0	4.54682
76.0	3.16163
77.0	3.35781
78.0	2.90759
79.0	4.31245
80.0	7.89974
81.0	9.06261
82.0	7.04479

CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....04 (DP1-005)  
DATE OF TRIAL....14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
83.0	6.54426
84.0	5.80532
85.0	6.82323
86.0	5.39413
87.0	5.07490
88.0	3.68952
89.0	2.63961
90.0	2.30044
91.0	2.37703
92.0	4.49720
93.0	3.25615
94.0	5.55048
95.0	8.23109
96.0	7.64224
97.0	6.63963
98.0	7.63987
99.0	7.02179
100.0	5.08764
101.0	4.33653
102.0	4.67304
103.0	5.20094
104.0	5.04891
105.0	6.05558
106.0	8.38377
107.0	10.05250
108.0	5.75276
109.0	9.57720
110.0	9.08156
111.0	5.71228
112.0	5.18674
113.0	3.65699
114.0	4.14803
115.0	3.74371
116.0	2.75193
117.0	3.60661
118.0	3.61840
119.0	3.64898
120.0	6.04658
121.0	6.65506
122.0	7.41774
123.0	7.99382

CL VALUES (GM/M\*\*2) BACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D4 (D-1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
124.0	8.09771
125.0	8.52744
126.0	9.70092
127.0	9.89349
128.0	11.13234
129.0	11.73461
130.0	10.30602
131.0	10.06670
132.0	9.24660
133.0	6.72355
134.0	4.87366
135.0	4.25392
136.0	5.41013
137.0	4.08129
138.0	3.55589
139.0	2.85934
140.0	3.01257
141.0	3.50120
142.0	3.46645
143.0	2.53451
144.0	2.36367
145.0	1.49993
146.0	1.22662
147.0	1.22913
148.0	1.02501
149.0	.85817
150.0	.58559
151.0	.51708
152.0	.57917
153.0	.53813
154.0	.47822
155.0	.45259
156.0	.49919
157.0	.44249
158.0	.42952
159.0	.32486
160.0	.29422
161.0	.30504
162.0	.27327
163.0	.23138
164.0	.22285

CL VALUES (GM/M\*\*2) WERE CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D4 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DEHRIS

SECONDS FROM FUNCTION	CENTER
165.0	.26670
166.0	.31369
167.0	.19503
168.0	.25264
169.0	.27049
170.0	.23167
171.0	.21883
172.0	.23011
173.0	.29925
174.0	.41118
175.0	.36007
176.0	.36827
177.0	.38949
178.0	.37682
179.0	.30347
180.0	.28398
181.0	.28532
182.0	.27373
183.0	.31737
184.0	.27748
185.0	.28840
186.0	.30797
187.0	.32128
188.0	.30504
189.0	.38931
190.0	.41210
191.0	.45475
192.0	.45198
193.0	.37317
194.0	.39879
195.0	.42481
196.0	.39107
197.0	.39055
198.0	.39244
199.0	.40671
200.0	.37223
201.0	.41099
202.0	.43874
203.0	.40314
204.0	.42516
205.0	.34328

CL VALUES (GM/M\*\*2) WACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....D4 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
OBSCURANT.....DUST/DERRIS

SECONDS FROM FUNCTION	CENTER
206.0	.36764
207.0	.32342
208.0	.31944
209.0	.32705
210.0	.28713
211.0	.31243
212.0	.34064
213.0	.26183
214.0	.30762
215.0	.29122
216.0	.21602
217.0	.25592
218.0	.26372
219.0	.29656
220.0	.26343
221.0	.22251
222.0	.17429
223.0	.25606
224.0	.23725
225.0	.27517
226.0	.26516
227.0	.23077
228.0	.19789
229.0	.19562
230.0	.18475
231.0	.16178
232.0	.19090
233.0	.19884
234.0	.21306
235.0	.26193
236.0	.29825
237.0	.33631
238.0	.25300
239.0	.32339
240.0	.27512
241.0	.36872
242.0	.35910
243.0	.44828
244.0	.46599
245.0	.50382
246.0	.48887

CL VALUES (GM/MM<sup>2</sup>) WACK CALCULATED USING TRANSMITTANCE  
AND EXTINCTION COEFFICIENT

TRIAL NUMBER....04 (DP1-005)  
DATE OF TRIAL...14 SEP 1978  
FUNCTION TIME...12:20:57  
DISCURANT.....DUST/DEBRIS

SECONDS FROM FUNCTION	CENTER
247.0	.39611
248.0	.39362
249.0	.36487
250.0	.37844
251.0	.28666
252.0	.28130
253.0	.30961
254.0	.28695
255.0	.23275
256.0	.20935
257.0	.23811
258.0	.27481
259.0	.29306
260.0	.33847
261.0	.35015
262.0	.37784

## APPENDIX G. REFERENCES

1. TWX, P 142055Z, April 78, PM Smoke, APG, MD, DRCPM-SMK-T, Subject: Test and Cost Estimate Request for DPG Safari Support of Dust Tests at Fort Sill, and Fort Knox. UNCLASSIFIED
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3. Dust/Debris Test Conducted at Fort Sill, Oklahoma, Final Test Report, TECOM Project 7-CO-RD8-DPI-005, US Army Dugway Proving Ground, Dugway, Utah 84022. UNCLASSIFIED
4. TWX, R 231241Z, 23 June 78, PM Smoke, APG, MD, DRCPM-SMK-T, Subject: Dust/Debris Field Testing. UNCLASSIFIED
5. Field Operations Procedure for Dugway Proving Ground Safari Support of Dust/Debris Test at Fort Sill, Oklahoma. UNCLASSIFIED
6. Field Operations Procedure for Dust/Debris Test (Fort Sill Add-on), US Army Dugway Proving Ground, Utah 84022. UNCLASSIFIED
7. Transmittal of Test Data for Inventory Smoke Munitions Test (Smoke Week No. 1) TECOM Project No. 7-CO-RD7-DPI-002. UNCLASSIFIED
8. Characterization of Obscuring Clouds in the Field (U) Lothar L. Salomon, E. G. Peterson, E. W. Burgess, W. Cooley, Jr. and F. L. Carter, Proceedings of the Army Science Conference, June 1978, West Point, New York. CONFIDENTIAL
9. Dust Trial Phase of Inventory Smoke Munitions Test (Phase IIa), Final Test Report, TECOM Project 7-CO-RD7-DPI-002, US Army Dugway Proving Ground, Utah 84022. UNCLASSIFIED



## APPENDIX H. ABBREVIATIONS

CL	Integrated concentration along the line of sight
cm	Centimeter
CP	Command Post
DPG	Dugway Proving Ground
gm	Grams
HEP	High Explosive Plastic
m	Meter
nm	Nanometer
PSA	Particle Size Analyzer
$\mu$ m	Micrometer
sr	Steradian
Z-Time	Time when munition impacted on the grid.

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